

STIC Search Report

EIC 1700

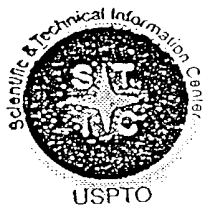
STIC Database Tracking Number: 135567

**TO: Helen Pezzuto
Location: REM 10A29
Art Unit : 1713
October 21, 2004**

Case Serial Number: 10/773257

**From: Kathleen Fuller
Location: EIC 1700
REMSSEN 4B28
Phone: 571/272-2505
Kathleen.Fuller@uspto.gov**

Search Notes



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

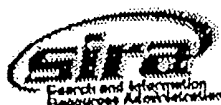
- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention.

Comments:

Drop off or send completed forms to EIC1700 REMSEN 4B28



* PLEASE GIVE REQUEST TO Mrs. K. Fuller. THANKS!
Access DB#

SEARCH REQUEST FORM

135561

Scientific and Technical Information Center

Requester's Full Name: HELEN PEZZURO Examiner #: 70058 Date: 10/18/04
Art Unit: 1713 Phone Number: 302-1108 Serial Number: 10/773,257
Mail Box and Bldg/Room Location: REM-1B429 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: SEE ATTACHED

(CIT 2.1)

Inventors (please provide full names):

Pat. & T.M. Office

Earliest Priority Filing Date: 7/16/01

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

claims 7-10 pending (parent 6,706,771)
A method of making a "membrane" by forming a solution of a polymer, a silver salt and a phthalate compound using alcohol on TAP as solvent
* See pages attached showing preferred embodiments of phthalate (dimethyl-, dibutyl-, dioctyl-, diphenylphthalate), polymer (PVP, PMMA) and silver salt
* claim 7 is broad i.e. search solution of any combination of a polymer, phthalate and silver salt on a substrate is sufficient.

THANKS!

STAFF USE ONLY

Searcher: K. Fuller

Type of Search

NA Sequence (#) _____

STN ✓

Vendors and cost where applicable

Searcher Phone #: _____

AA Sequence (#) _____

Dialog _____

Searcher Location: _____

Structure (#) _____

Questel/Orbit _____

Date Searcher Picked Up: _____

Bibliographic ✓

Dr. Link _____

Date Completed: 10/21/04

Litigation _____

Lexis/Nexis _____

Searcher Prep & Review Time: 30

Fulltext _____

Sequence Systems _____

Clerical Prep Time: _____

Patent Family _____

WWW/Internet _____

Online Time: 4.5

Other _____

Other (specify) _____

=> FILE REG

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DICTIONARY FILE UPDATES: 20 OCT 2004 HIGHEST RN 766487-31-4

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

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<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> FILE HCAPLUS

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FILE COVERS 1907 - 21 Oct 2004 VOL 141 ISS 17
FILE LAST UPDATED: 20 Oct 2004 (20041020/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> D QUE L37

L2 27 SEA FILE=REGISTRY ABB=ON (106-97-8/BI OR 106-98-9/BI OR
109-66-0/BI OR 109-67-1/BI OR 109-99-9/BI OR 115-07-1/BI OR
117-84-0/BI OR 131-11-3/BI OR 14104-20-2/BI OR 25038-87-3/BI
OR 25805-17-8/BI OR 26042-63-7/BI OR 26042-64-8/BI OR 2923-28-6
/BI OR 69488-61-5/BI OR 74-84-0/BI OR 74-85-1/BI OR 74-98-6/BI
OR 7783-93-9/BI OR 84-62-8/BI OR 84-74-2/BI OR 9003-01-4/BI OR
9003-20-7/BI OR 9003-39-8/BI OR 9004-35-7/BI OR 9004-36-8/BI
OR 9011-14-7/BI)
L4 7 SEA FILE=REGISTRY ABB=ON L2 AND PMS/CI
L5 4 SEA FILE=REGISTRY ABB=ON L2 AND PHTHALAT?

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

L6 5 SEA FILE=REGISTRY ABB=ON L2 AND SILVER
 L7 1 SEA FILE=REGISTRY ABB=ON THF/CN
 L8 162933 SEA FILE=HCAPLUS ABB=ON L5 OR ?PHTHALAT?
 L9 115257 SEA FILE=HCAPLUS ABB=ON L4
 L10 3424 SEA FILE=HCAPLUS ABB=ON L6
 L11 7 SEA FILE=HCAPLUS ABB=ON L8 AND L9 AND L10
 L12 3084 SEA FILE=HCAPLUS ABB=ON L8 AND MEMBRANE?
 L13 175 SEA FILE=HCAPLUS ABB=ON L12 AND (AG OR SILVER OR L10)
 L14 82 SEA FILE=HCAPLUS ABB=ON L13 AND ?POLYMER?
 L15 38 SEA FILE=HCAPLUS ABB=ON L14 AND (SOLVENT# OR ALC OR ALCOHOL?
 OR THF OR L7)
 L16 24 SEA FILE=HCAPLUS ABB=ON L14 AND (SUBSTRAT? OR SUPPORT?)
 L17 56 SEA FILE=HCAPLUS ABB=ON L11 OR L15 OR L16
 L18 34 SEA FILE=HCAPLUS ABB=ON L13 AND (POLYMER? OR PLASTIC?)/SC,SX
 L19 9 SEA FILE=HCAPLUS ABB=ON L18 AND (SUBSTRAT? OR SUPPORT?)
 L20 10 SEA FILE=HCAPLUS ABB=ON L18 AND (SOLVENT# OR ALC OR ALCOHOL?
 OR THF OR L7)
 L21 60 SEA FILE=HCAPLUS ABB=ON L17 OR L19 OR L20
 L22 4 SEA FILE=REGISTRY ABB=ON METHANOL/CN OR ETHANOL/CN OR
 N-PROPANOL/CN OR ISOPROPANOL/CN
 L23 4 SEA FILE=REGISTRY ABB=ON N-BUTANOL/CN OR ISOBUTANOL/CN OR
 TERT-BUTANOL/CN OR SEC-BUTANOL/CN
 L24 8 SEA FILE=REGISTRY ABB=ON L22 OR L23
 L25 7 SEA FILE=HCAPLUS ABB=ON L14 AND (L24 OR (METHYL OR ETHYL OR
 PROPYL OR BUTYL) (W)ALCOHOL? OR CH3OH OR ETOH OR I(W)PROH OR
 PROOH OR METHANOL OR ETHANOL OR PROPANOL OR BUTANOL)
 L26 0 SEA FILE=HCAPLUS ABB=ON L14 AND PROH
 L27 7 SEA FILE=HCAPLUS ABB=ON L25 OR L26
 L28 61 SEA FILE=HCAPLUS ABB=ON L21 OR L27
 L29 5 SEA FILE=HCAPLUS ABB=ON L28 AND POF/RL
 L30 21 SEA FILE=HCAPLUS ABB=ON L28 AND (POLYMER? OR PLASTIC?)/SC,SX
 L31 21 SEA FILE=HCAPLUS ABB=ON L29 OR L30
 L32 40 SEA FILE=HCAPLUS ABB=ON L28 NOT L31
 L33 80584 SEA FILE=HCAPLUS ABB=ON MEMBRANE?(4A) (PRODUC? OR METHOD? OR
 PREPAR? OR MANUF? OR PREP/RL OR PROCESS?)
 L34 6 SEA FILE=HCAPLUS ABB=ON L32 AND L33
 L35 25 SEA FILE=HCAPLUS ABB=ON L32 AND MEMBRANE?/IT
 L36 46 SEA FILE=HCAPLUS ABB=ON L31 OR L34 OR L35
 L37 47 SEA FILE=HCAPLUS ABB=ON L36 OR L11

=> D L37 BIB ABS IND HITSTR 1-47

L37 ANSWER 1 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2004:780583 HCAPLUS
 TI Purification of fluids with nanomaterials containing defective carbon
 nanotubes
 IN Cooper, Christopher H.; Cummings, Alan G.; Starostin, Mikhail Y.;
 Honsinger, Charles P.
 PA Seldon Technologies, LLC, USA
 SO PCT Int. Appl., 106 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004080578	A1	20040923	WO 2004-US6811	20040308
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,				

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CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
 SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
 TD, TG

PRAI US 2003-452530P P 20030307
 US 2003-468109P P 20030506
 US 2003-499375P P 20030903

AB A nanostructured material containing defective carbon nanotubes chosen from impregnated, functionalized, doped, charged, coated, and irradiated nanotubes is used for the purification of fluids by adsorption, absorption and/or size exclusion. The defective carbon nanotubes contain a defect which is a lattice distortion in at least one carbon ring. The nanostructured material contains carbon nanotubes in a liquid, solid, or gaseous medium. The solid medium can be metallic, ceramic, or **polymeric** fibers, **substrates**, and particles, together forming a nanomembrane. The **polymeric** material can be nylon, polyurethane, acrylic, methacrylic, polycarbonate, epoxy, silicone rubbers, natural rubbers, synthetic rubbers, vulcanized rubbers, polystyrene, polyethylene **terephthalate**, polybutylene **terephthalate**, poly (p-phenylene)terephthalamide, and polyester ester ketene, polyethylene **terephthalate**, viton fluoroelastomer, polytetrafluoroethylene, polyvinyl chloride, polyester (polyethylene **terephthalate**), polypropylene, and polychloroprene. The ceramic material can be boron carbide, boron nitride, boron oxide, boron phosphate, spinel, garnet, lanthanum fluoride, calcium fluoride, silicon carbide, carbon and its allotropes, silica, glass, quartz, alumina, aluminum nitride, zirconia, zirconium carbide, zirconium boride, zirconium nitride, hafnium boride, thorium oxide, yttria, magnesia, phosphorus oxide, cordierite, mullite, silicon nitride, ferrite, sapphire, steatite, titanium carbide, titanium nitride, or titanium boride. The metallic material can be Al, B, Cu, Co, Au, Pt, Si, steel, Ti, Rh, In, Fe, Pd, Ge, Sn, Pb, W, Nb, Mo, Ni, **Ag**, Zr, Y, and their alloys. The liquid medium can be water, oil, organic or inorg. **solvents**, liquid N2 and CO2. Gaseous medium can be air, argon, nitrogen, helium, ammonia, and CO2. The carbon nanotubes can be functionalized with organic compds., such as carboxyls, amines, polyamides, polyamphiphiles, diazonium salts, pyrenyls, or silanes, or with inorg. compds., especially fluorine compds. of boron, titanium, niobium, or tungsten. The nanostructured material can be used for the purification of fluids, such as water, petroleum and its byproducts, biol. fluids, foodstuffs, beverages, and medicine. Contaminants being removed can be pathogens, microbiol. organisms, DNA, RNA, natural organic mols., molds, fungi, natural and synthetic toxins, heavy metals, endotoxins, proteins, or enzymes.

IC ICM B01D071-02
 ICS C02F001-44; B01D069-14

CC 47-2 (Apparatus and Plant Equipment)
 Section cross-reference(s): 63, 61, 51, 10, 17, **38**

ST fluid purifn **membrane** filter nanomaterial carbon nanotube composite; water purifn disinfection pathogen carbon nanotube **membrane** filter; fuel purifn bacteria removal **membrane** filtration carbon nanotube composite

IT Jet aircraft fuel
 (biol. contaminated, purification; purification of fluids with nanomaterials)

containing defective carbon nanotubes)

IT Nanotubes
(carbon; purification of fluids with nanomaterials containing defective carbon nanotubes)

IT Toxins
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(endotoxins; purification of fluids with nanomaterials containing defective carbon nanotubes)

IT Absorption
Adsorption
Bacillus (bacterium genus)
Ceramics
Drinking waters
Enterobacteria phage MS2
Escherichia coli
Fungi
Membrane filters
Micrococcus
Mold (fungus)
Pathogen
Petroleum products
(purification of fluids with nanomaterials containing defective carbon nanotubes)

IT Metals
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(purification of fluids with nanomaterials containing defective carbon nanotubes)

IT Polymers
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(purification of fluids with nanomaterials containing defective carbon nanotubes)

IT DNA
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon nanotubes)

IT Enzymes
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon nanotubes)

IT Heavy metals
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon nanotubes)

IT Proteins
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon nanotubes)

IT RNA
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(purification of fluids with nanomaterials containing defective carbon

nanotubes)
 IT Synthetic fibers
 RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
 (silica, nanofibers; purification of fluids with nanomaterials containing defective carbon nanotubes)
 IT Water purification
 (sterilization and disinfection; purification of fluids with nanomaterials containing defective carbon nanotubes)
 IT 7440-44-0, Carbon
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (nanotubes; purification of fluids with nanomaterials containing defective carbon nanotubes)
 IT 9003-07-0, Polypropylene
 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
 (nonwoven fabric, carrier; purification of fluids with nanomaterials containing defective carbon nanotubes)
 IT 762261-71-2
 RL: DEV (Device component use); USES (Uses)
 (purification of fluids with nanomaterials containing defective carbon nanotubes)
 IT 7440-38-2, Arsenic
 RL: PEP (Physical, engineering or chemical process); POL (Pollutant); PYP (Physical process); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
 (purification of fluids with nanomaterials containing defective carbon nanotubes)
 RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 2 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2004:458819 HCAPLUS
 DN 141:165372
 TI Electrochemical transport properties of a cone-shaped nanopore: revisited
 AU Woermann, D.
 CS Institute of Physical Chemistry, University of Koeln, Cologne, 50939, Germany
 SO Physical Chemistry Chemical Physics (2004), 6(12), 3130-3132
 CODEN: PPCPFQ; ISSN: 1463-9076
 PB Royal Society of Chemistry
 DT Journal
 LA English
 AB There are reports in the literature that a single cone-shaped nanopore generated in a **polymer** foil separating two equally concentrated dilute aqueous KCl solns. can reach high and low stationary elec. conductivity states resp. depending on the sign of the applied elec. potential. From published data it was argued (D. Woermann, Phys. Chemical Phys., 2003, 5, 1853) that this phenomenon can be understood in terms of a well established model describing the electrochem. transport properties of polyelectrolyte **membranes** (model of the **membrane** with narrow pores). In the present contribution exptl. evidence is presented which gives strong **support** to these arguments using a model system. Based on the model of the **membrane** with narrow pores a composite **membrane** is constructed mimicking the structure and electrochem. function of an ensemble of conical nanopores. The characteristic electrochem. transport property of the composite **membrane** is that of a cone-shaped nanopore.

CC 76-2 (Electric Phenomena)
 Section cross-reference(s): 36, 66, 72
 ST cond electrolytic **membrane** composite nanopore
 IT **Membranes**, nonbiological
 (composite; electrochem. transport properties of cone-shaped nanopore
 in composite **membranes**)
 IT Electric conductivity
 Simulation and Modeling, physicochemical
 (electrochem. transport properties of cone-shaped nanopore in composite
membranes)
 IT Polyesters, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (electrochem. transport properties of cone-shaped nanopore in composite
membranes)
 IT Ionomers
 RL: NUU (Other use, unclassified); USES (Uses)
 (polyoxyalkylenes, fluorine- and sulfo-containing; electrochem. transport
 properties of cone-shaped nanopore in composite **membranes**)
 IT 7440-22-4, **Silver**, uses 7447-40-7, Potassium chloride (KCl),
 uses 7647-14-5, Sodium chloride (NaCl), uses 7783-90-6, **Silver**
 chloride (AgCl), uses 25038-59-9, **Polyethyleneterephthalate**,
 uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (electrochem. transport properties of cone-shaped nanopore in composite
membranes)
 RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 3 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2004:200852 HCAPLUS

DN 140:243530

TI Manufacture of heat-developable photographic material coated with
 electrolytic oxidized undercoat layer solution

IN Hanyu, Takeshi

PA Konica Minolta Holdings Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004077793	A2	20040311	JP 2002-237984	20020819
PRAI	JP 2002-237984		20020819		

OS MARPAT 140:243530

AB The material is manufactured by steps for (1) treating a polyester
support by corona, plasma, UV, electron beam, or x-ray radiation,
 (2) oxidizing an undercoat layer coating solution by electrolysis, coating
 the **support** with it, drying, curing the **support** at
 80-230°, and then (3) applying a photosensitive layer containing a
Ag halide grain, an organic **Ag** salt, a reducing agent, and
 a binder on the **support**. It shows high adhesion, low fog, and
 improved storage stability.

IC ICM G03C001-76

ICS G03C001-498

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

Section cross-reference(s): 38

ST heat developable photog film undercoat layer electrolysis oxidized;

- polyester **support** surface treatment photog material
- IT Ion exchange **membranes**
Oxidation, electrochemical
(heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
- IT Photographic films
(heat-developable; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
- IT Electric corona
Electron beams
Plasma
Surface treatment
UV radiation
X-ray
(polyester **support** treated with; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
- IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**support**; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
- IT Oxidizing agents
(undercoat layer containing; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
- IT 2224-15-9 4206-61-5 134098-79-6 216500-57-1 428460-98-4.
436806-84-7
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent, undercoat layer containing; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
- IT 9011-08-9, Acrylic acid-vinylidene chloride **copolymer**
26264-83-5, Acrylic acid-ethyl acrylate-vinylidene chloride **copolymer** 29760-66-5 52192-09-3, Ethyl acrylate-2-hydroxyethyl acrylate-methyl methacrylate-styrene **copolymer** 83601-69-8
661467-55-6 668448-44-0, Acrylic acid-hexyl acrylate-methyl methacrylate-styrene **copolymer** 668448-47-3, Butyl acrylate-ethyl acrylate-2-hydroxyethyl acrylate-2-propen-1-amine **copolymer** 668448-50-8
RL: TEM (Technical or engineered material use); USES (Uses)
(heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
- IT 80-43-3, Dicumyl peroxide 105-74-8, Lauroyl peroxide 127-52-6, Chloramine B 127-65-1, Chloramine T 2167-23-9, 2,2-Di-tert-butyl peroxybutane 7722-84-1, Hydrogen peroxide, uses 12262-58-7, Cyclohexanone peroxide 17025-47-7 236420-30-7 457068-91-6 623904-14-3 659726-63-3 661467-52-3 661467-53-4
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(oxidizing agent, undercoat layer containing; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
- IT 25038-59-9, Poly(ethylene **terephthalate**), uses
RL: TEM (Technical or engineered material use); USES (Uses)
(**support**; heat-developable photog. material coated with electrolytic oxidized undercoat layer solution)
- L37 ANSWER 4 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
- AN 2004:139595 HCAPLUS
- DN 140:209545
- TI Multiplayer dry **membrane** pH electrode
- IN Terashima, Masaaki; Seshimoto, Osamu

PA Fuji Photo Film Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004053401	A2	20040219	JP 2002-210804	20020719
	US 2004074786	A1	20040422	US 2003-621400	20030718
PRAI	JP 2002-210804	A	20020719		

AB The electrode comprises a nonelec. conductive **substrate**, a pair of electrode layers consisting of a **Ag** layer and a **Ag** halide layer on the **substrate** with insulation in between, and an ion (H) selective **membrane**. A sample solution introduction opening and a reference solution introduction opening are formed on the **substrate** and a liquid bridge is used to connected the 2 solns. The H ion selective **membrane** is saturated by CO₂. The device can be used for determination of H ion concentration in biol. materials.

IC ICM G01N027-403
 ICS G01N027-333; G01N027-416; G01N033-84

CC 79-2 (Inorganic Analytical Chemistry)
 Section cross-reference(s): 9, 72

ST multiplayer dry film pH electrode biol material

IT Acidity
 Biological materials
 Blood analysis
 pH electrodes
 (multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)

IT Plastics, uses
 Polyesters, uses
 RL: DEV (Device component use); USES (Uses)
 (multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)

IT 124-38-9, Carbon dioxide, uses
 RL: DEV (Device component use); USES (Uses)
 (H ion selective **membrane** saturated by; multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)

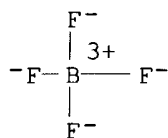
IT 144-55-8, Sodium hydrogen carbonate, uses 10043-52-4, Calcium chloride, uses
 RL: DEV (Device component use); USES (Uses)
 (electrode solution containing; multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)

IT 7440-70-2, Calcium, analysis 12408-02-5, Hydrogen ion, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (multiplayer dry **membrane** pH electrode for determination of H ion concentration in biol. materials)

IT 56-81-5, Glycerine, uses 1132-61-2, MOPS 1754-47-8,
 Dioctylphenylphosphonate 3586-60-5, TDDA 7440-22-4, **Silver**,
 uses 7783-90-6, **Silver** chloride, uses 9003-22-9, Vinyl
 chloride vinyl acetate **copolymer** 9003-39-8, PVP 14680-77-4,
 Potassium tetrakis(p-chlorophenylborate) 25038-59-9,
Polyethyleneterephthalate, uses 40835-97-0, Phenol,
 4-(1,1,3,3-tetramethylbutyl)-, hydrogen phosphate, calcium salt
 55965-84-9, ProClin 300
 RL: DEV (Device component use); USES (Uses)
 (multiplayer dry **membrane** pH electrode for determination of H ion

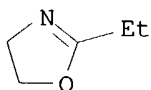
concentration in biol. materials)

L37 ANSWER 5 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2004:123765 HCAPLUS
 DN 140:393070
 TI Analysis of facilitated olefin transport through polymer electrolyte membranes containing silver salts
 AU Ko, Dongkyun; Kim, Jong Hak; Chung, Sung Taik; Kang, Yong Soo
 CS Center for Facilitated Transport Membranes, KIST, Seoul, S. Korea
 SO Memburein (2003), 13(4), 239-245
 CODEN: MEMBEP; ISSN: 1226-0088
 PB Membrane Society of Korea
 DT Journal
 LA English
 AB The origin of large difference of selectivity of C3H6 over C3H8 between pure gas and mixed gas through silver polymer electrolyte membranes is investigated. Firstly, the effect of feed condition on the permeance of mixture gas (C3H6/C3H8) and the separation performance is examined Upon decrease of the C3H6 concentration, the C3H6 permeance decreased whereas the permeance of C3H8 increased, resulting in the decrease of the selectivity of C3H6/C3H8. This result is ascribed to the C3H6-induced plasticization of membranes. Exptl. results were validated by math. modeling, where pressure independent permeabilities were used.
 CC 51-11 (Fossil Fuels, Derivatives, and Related Products)
 ST alkene sepn alkane polymer electrolyte membranes contg silver salts
 IT **Membranes**, nonbiological
 Polymer electrolytes
 Simulation and Modeling, physicochemical
 (olefin transport through polymer electrolyte **membranes** containing silver salts)
 IT Alkanes, processes
 Alkenes, processes
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (separation,; olefin transport through polymer electrolyte **membranes** containing silver salts)
 IT 4654-26-6, Dioctyl **terephthalate** 14104-20-2
25805-17-8, Poly(2-ethyl-2-oxazoline)
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (olefin transport through polymer electrolyte **membranes** containing silver salts)
 IT 74-98-6, Propane, processes 115-07-1, Propene, processes
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (separation,; olefin transport through polymer electrolyte **membranes** containing silver salts)
 IT **14104-20-2 25805-17-8**, Poly(2-ethyl-2-oxazoline)
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
 (olefin transport through polymer electrolyte **membranes** containing silver salts)
 RN 14104-20-2 HCAPLUS
 CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

RN 25805-17-8 HCAPLUS
 CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 10431-98-8
 CMF C5 H9 N O



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 6 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2004:20091 HCAPLUS
 DN 140:73584
 TI Method and apparatus for separating blood components
 IN Yuasa, Takeshi; Yasunaga, Reiko
 PA Kawasumi Kagaku Kogyo Kaisha, Ltd., Japan; Liijaa K. K.
 SO Jpn. Kokai Tokkyo Koho, 23 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004003920	A2	20040108	JP 2002-216566	20020725
PRAI	JP 2002-84853	A	20020326		

AB A method and an apparatus for separating blood components are provided, with which the basic biochem. anal. is performed without using a conventional and complicated blood serum or plasma separation method. The method comprises at least two steps: (1) a step for mixing a blood sample with a liquid prepared by dissolving at least one chemical selected from a group of nonelectrolytes, ampholytes or substances which are hardly charged, or a combination of these chems. in a **solvent** selected from water or a **solvent** which does not contain electrolytes at all or almost at all, or a combination of these **solvents**; and (2) a step for separating blood components.

IC ICM G01N033-48
 CC 9-9 (Biochemical Methods)
 ST blood component sepn app biochem analysis

- IT Agglutinins and Lectins
 - RL: NUU (Other use, unclassified); USES (Uses)
 - (agarose-bound; method and apparatus for separating blood components)
- IT Metals, uses
 - RL: NUU (Other use, unclassified); USES (Uses)
 - (compound; method and apparatus for separating blood components)
- IT Cations
 - (divalent; method and apparatus for separating blood components)
- IT Films
 - (flat, tubular; method and apparatus for separating blood components)
- IT Amphoteric materials
 - Blood
 - Blood analysis
 - Blood plasma
 - Blood serum
 - Buffers
 - Dissolution
 - Erythrocyte
 - Filter paper
 - Leukocyte
 - Nonelectrolytes
 - Osmotic pressure
 - Paper
 - Platelet (blood)
 - Separation
 - Solvents**
 - pH
 - (method and apparatus for separating blood components)
- IT Agglutinins and Lectins
 - Alditols
 - Carbohydrates, uses
 - Collagens, uses
 - Disaccharides
 - Fibers
 - Fluoropolymers, uses**
 - Gelatins, uses
 - Glass, uses
 - Glass fibers, uses
 - Inorganic compounds
 - Monosaccharides
 - Polyamides, uses
 - Polyamides, uses
 - Polycarbonates, uses
 - Polyesters, uses
 - Polyimides, uses
 - Polymers, uses**
 - Polyolefins
 - Polysaccharides, uses
 - Polysulfones, uses
 - Polyurethanes, uses
 - RL: NUU (Other use, unclassified); USES (Uses)
 - (method and apparatus for separating blood components)
- IT **Polymers, uses**
 - RL: NUU (Other use, unclassified); USES (Uses)
 - (particle; method and apparatus for separating blood components)
- IT Foams
 - (resin; sponge; method and apparatus for separating blood components)
- IT **Polymers, uses**
 - RL: NUU (Other use, unclassified); USES (Uses)

(water-soluble; method and apparatus for separating blood components)

IT Glass fibers, uses
RL: NUU (Other use, unclassified); USES (Uses)
(wool; method and apparatus for separating blood components)

IT 14808-60-7, Quartz, uses
RL: NUU (Other use, unclassified); USES (Uses)
(fiber; method and apparatus for separating blood components)

IT 7440-44-0, Carbon, uses
RL: NUU (Other use, unclassified); USES (Uses)
(material; method and apparatus for separating blood components)

IT 7440-22-4, **Silver**, uses
RL: NUU (Other use, unclassified); USES (Uses)
(~~membrane~~; **method** and apparatus for separating blood components)

IT 50-69-1, Ribose 50-70-4, Sorbitol, uses 50-99-7, D-Glucose, uses
51-43-4, Epinephrine 56-40-6, Glycine, uses 56-81-5, Glycerol, uses
56-82-6, Glycerose 57-48-7, Fructose, uses 57-50-1, Saccharose, uses
58-64-0, 5'-ADP, uses 58-86-6, Xylose, uses 59-23-4, Galactose, uses
63-42-3, Lactose 69-65-8, Mannitol 69-79-4, Maltose 74-85-1,
Ethylene, uses 79-10-7D, Acrylic acid, **copolymer** 87-99-0,
Xylitol 147-81-9, Arabinose 150-25-4, N,N-Bis(2-hydroxyethyl)glycine
470-55-3, Stachyose 488-81-3, Adonitol 506-32-1, Arachidonic acid
512-69-6, Raffinose 528-50-7, Cellobiose 533-67-5, Deoxyribose
557-75-5D, Vinylalcohol, **copolymer** 585-88-6, Maltitol
585-99-9, Melibiose 654-29-5, Mannoketoheptose 1109-28-0, Maltotriose
1132-61-2, 3-(N-Morpholino)propane sulfonic acid 1344-28-1, Alumina,
uses 1404-55-3, Ristocetin 2152-56-9, Arabitol 2438-80-4, Fucose
3458-28-4, Mannose 3615-41-6, Rhamnose 4432-31-9, 2-(N-
Morpholino)ethane sulfonic acid 5349-37-1, D-glucos-2-Heptulose
5625-37-6, 1,4-Piperazinediethanesulfonic acid 5704-04-1,
N-[Tris(hydroxymethyl)methyl]glycine 6976-37-0, 2,2-Bis(hydroxymethyl)-
2,2',2''-nitrilotriethanol 7365-44-8, N-Tris(hydroxymethyl)methyl-2-
aminoethane sulfonic acid 7365-45-9, 2-[4-(2-Hydroxyethyl)-1-
piperazinyl]ethane sulfonic acid 7439-95-4, Magnesium, uses 7440-70-2,
Calcium, uses 7631-86-9, Silica, uses 7732-18-5, Water, uses
9002-04-4, Thrombin 9002-84-0, Polytetrafluoroethylene 9002-85-1,
Polyvinylidene chloride 9002-86-2, Polyvinyl chloride 9002-88-4,
Polyethylene 9003-07-0, Polypropylene 9003-39-8, Polyvinylpyrrolidone
9003-53-6, Polystyrene 9004-34-6, Cellulose, uses 9004-35-7, Cellulose
acetate 9004-54-0, Dextran, uses 9004-67-5, Methylcellulose
9004-70-0, Nitrocellulose 9005-25-8, Starch, uses 9011-14-7,
Poly(methylmethacrylate) 9037-55-2, Galactan 9057-02-7, Pullulan
10010-67-0 10191-18-1, N,N-Bis(2-hydroxyethyl)-2-aminoethane sulfonic
acid 11078-30-1, Galactomannan 14417-51-7, Mannobiose 16052-06-5
24937-79-9, PVDF 25014-41-9, Polyacrylonitrile 25038-59-9,
Polyethyleneterephthalate, uses 25667-42-9, Polyethersulfone
28728-55-4, Polybrene 29915-38-6, N-Tris(hydroxymethyl)methyl-3-
aminopropane sulfonic acid 64431-96-5, 1,3-Bis[tris(hydroxymethyl)methyl
amino]propane 68399-77-9, 3-(N-Morpholino)-2-hydroxypropane sulfonic
acid 68399-78-0 68399-80-4 68399-81-5 70331-82-7 71119-22-7
71119-23-8, 2-(N-Morpholino)ethane sulfonic acid sodium salt 75277-39-3
109191-31-3, N-(2-Acetamido)-2-aminoethane sulfonic acid
RL: NUU (Other use, unclassified); USES (Uses)
(method and apparatus for separating blood components)

L37 ANSWER 7 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:695921 HCAPLUS

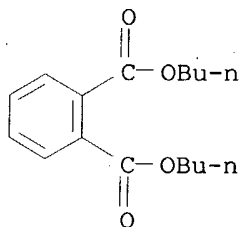
DN 140:121593

TI A New PVC-Membrane Electrode Based on a Diazatetrathia (N2S4)

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

- Macrocyclic Ligand for Selective Determination of **Silver** Ion
- AU Singh, A. K.; Singh, Rupam; Bhattacharjee, G.
- CS Department of Chemistry, Indian Institute of Technology-Roorkee, Roorkee, India
- SO Analytical Letters (2003), 36(12), 2623-2638
CODEN: ANALBP; ISSN: 0003-2719
- PB Marcel Dekker, Inc.
- DT Journal
- LA English
- AB A poly(vinyl chloride) based **membrane** based on neutral macrocyclic ionophore: 2,3,4:10,11,12-dipyridine-3,11-diaza-1,5,9,13-tetrathiacyclohexadeca-2,10-diene with Na tetra-Ph borate (STB) as an anion excluder and **dibutylphthalate** (DBP) and **dioctylphthalate** (DOP) as plasticizing **solvent** mediator was prepared and studied as a **Ag(I)**-selective electrode. The best performance was observed with the **membrane** having the ligand-PVC-DBP-STB composition 1:6:1:2, which worked well over a wide concentration range (3.98×10^{-6} mol L⁻¹ - 1.00×10^{-1} mol L⁻¹) with a Nernstian slope of 55.3 mV per decade of activity between pH 3.0-7.0. This electrode showed a fast response time of 15 s and was used over a period of three months with good reproducibility ($S = 0.3$ mV). The selectivity coefficient for mono-, di-, and trivalent cations indicate excellent selectivity for **Ag(I)** ions over a large number of cations. Anions such as NO₃⁻ and SO₄²⁻ do not interfere and the electrode also works satisfactorily in a partially nonaq. medium. The sensor was used as an indicator electrode in the potentiometric titration of **Ag(I)** with NaI solution. It also was used successfully for determination of **Ag(I)** in real samples.
- CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): 72, 74
- ST PVC **membrane** electrode diazatetrathia macrocyclic ligand **silver** detn
- IT Ion-selective electrodes
(a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion)
- IT Photographic developers
Photographic films
(a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion in radiol. films and photog. developing solns.)
- IT Titration
(potentiometric; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion by potentiometric titration)
- IT 7440-22-4, **Silver**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion)
- IT 9002-86-2, Ethene, chloro-, **homopolymer**
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver** ion)
- IT 143-66-8, Sodium tetraphenyl borate
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(anion excluder; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of

- silver ion)**
- IT 647024-86-0
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (ionophore; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver ion**)
- IT 84-74-2, Dibutylphthalate 117-81-7,
Diocetylphthalate
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (plasticizing **solvent** mediator; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver ion**)
- IT 84-74-2, Dibutylphthalate
 RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (plasticizing **solvent** mediator; a new PVC-**membrane** electrode based on a diazatetrathia (N2S4) macrocyclic ligand for selective determination of **silver ion**)
- RN 84-74-2 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L37 ANSWER 8 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2003:657677 HCAPLUS
 DN 139:342699
- TI **Silver(I)**-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative
- AU Ardakani, Mohammad Mazloum; Ensafi, Ali Asghar; Niasari, Mohammad Salavati; Mirhoseini, Hossain
- CS Department of Chemistry, Kashan University, Kashan, Iran
- SO Analytical Sciences (2003), 19(8), 1187-1190
 CODEN: ANSCEN; ISSN: 0910-6340
- PB Japan Society for Analytical Chemistry
- DT Journal
- LA English
- AB The performance of octahydroxycalix[4]arene derivative used as a neutral carrier for **silver polymeric membrane** electrode was studied. The sensor gave a good Nernstian response of 58 ± 1 mV per decade for **silver ion** in the activity range 3.3×10^{-6} to 3.3×10^{-2} M **Ag**⁺. The limit of detection reached 2.1×10^{-6} M **Ag**⁺ and exhibited high selectivity for **silver ion** against the alkali, alkaline earth and transition metal ions. The sensor can be used in wide pH range from 1.5 to 6.5. The response time of the sensor is less than 20 s. The potentiometric sensor

was used as the indicator electrode in the titration of **Ag⁺** ions by sodium chloride solution

CC 72-2 (Electrochemistry)
Section cross-reference(s): 25, 79

ST **silver** potentiometric sensor ion selective electrode
octahydroxycalixarene derivs

IT Sensors
(electrochem.; **silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT Titration
(potentiometric; of AgNO₃ with NaCl using **silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT Ion-selective electrodes
Membrane electrodes
(**silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT Macrocyclic compounds
RL: NUU (Other use, unclassified); USES (Uses)
(**silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT 7647-14-5, Sodium chloride, reactions
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(potentiometric titration of AgNO₃ with NaCl using **silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT 7440-22-4, **Silver**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(**silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT 129779-33-5P
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PREP (Preparation); PROC (Process)
(**silver**(I)-selective coated-wire electrode based on an octahydroxycalix[4]arene derivative)

IT 108-46-3, Resorcinol, reactions 112-31-2, n-Decylaldehyde
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(use in preparation of octahydroxycalix[4]arene derivative for **silver**(I)-selective coated-wire electrode)

IT 7647-01-0, Hydrochloric acid, uses
RL: NUU (Other use, unclassified); USES (Uses)
(use in preparation of octahydroxycalix[4]arene derivative for **silver**(I)-selective coated-wire electrode)

IT 143-66-8, Sodium tetraphenylborate
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)
(use in preparation of **silver**(I)-selective coated-wire electrode based on octahydroxycalix[4]arene derivative)

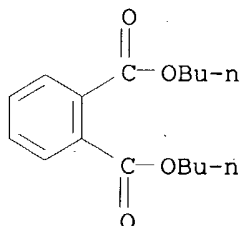
IT **84-74-2, Dibutylphthalate 109-99-9, THF**, uses 117-81-7, **Diethylphthalate** 9002-86-2, PVC
37682-29-4, 2-Nitrophenyloctyl ether
RL: NUU (Other use, unclassified); USES (Uses)
(use in preparation of **silver**(I)-selective coated-wire electrode based on octahydroxycalix[4]arene derivative)

IT **84-74-2, Dibutylphthalate 109-99-9, THF**, uses
RL: NUU (Other use, unclassified); USES (Uses)

(use in preparation of **silver**(I)-selective coated-wire electrode
based on octahydroxycalix[4]arene derivative)

RN 84-74-2 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 109-99-9 HCAPLUS

CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 9 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:656192 HCAPLUS

DN 139:199185

TI Fluidized bed activated by excimer plasma and materials produced therefrom

IN Janssen, Robert Allen; Lye, Jason

PA Kimberly-Clark Worldwide, Inc., USA

SO U.S. Pat. Appl. Publ., 8 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003157000	A1	20030821	US 2003-365315	20030212
	WO 2003071840	A1	20030828	WO 2003-US4731	20030214
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,				
	PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,				
	UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,				
	TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,				
	CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,				
	NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,				
	ML, MR, NE, SN, TD, TG				
PRAI	US 2002-357326P	P	20020215		
	US 2003-365315	A	20030212		
AB	A housing for holding a fluidized bed activated by excimer plasma, includes a fluidization chamber for holding particles and gas. The fluidization chamber includes a central interior electrode contained				

within, having a conductive layer and a dielec. layer. The fluidization chamber further consists of at least one containment wall made from a dielec. material. The containment wall has an inside and an outside surface. An outer electrode is wrapped around the outside of the containment wall. A feed line is in fluid communication with the fluidization chamber for feeding plasma gas into the chamber, via a porous base. A radio frequency high voltage source is in elec. connection with both the inside/interior and outside electrodes.

IC ICM B32B005-02
 NCL 422139000; 422186050
 CC 47-10 (Apparatus and Plant Equipment)
 ST excimer plasma activated fluidized bed
 IT Organic compounds, uses
 RL: DEV (Device component use); USES (Uses)
 (aliphatic, reagents; fluidized bed activated by excimer plasma and materials produced therefrom)
 IT Polyamides, uses
 Polyesters, uses
 Polyolefins
 Polysiloxanes, uses
 Polyurethanes, uses
 RL: DEV (Device component use); USES (Uses)
 (beads; fluidized bed activated by excimer plasma and materials produced therefrom)
 IT Nanotubes
 (carbon, particle; fluidized bed activated by excimer plasma and materials produced therefrom)
 IT Plasma
 (excimer; fluidized bed activated by excimer plasma and materials produced therefrom)
 IT Fluidized beds
 Frits
 (fluidized bed activated by excimer plasma and materials produced therefrom)
 IT Hydrocarbons, reactions
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (fluoro, reagents; acrylate and methacrylate esters; fluidized bed activated by excimer plasma and materials produced therefrom)
 IT Chlorides, reactions
 RL: RGT (Reagent); RACT (Reactant or reagent)
 (organic, fluoro- or perfluoro-; reagents; acrylate and methacrylate esters; fluidized bed activated by excimer plasma and materials produced therefrom)
 IT Ceramics
 (particle; fluidized bed activated by excimer plasma and materials produced therefrom)
 IT Aluminosilicates, uses
 Glass beads
 Zeolites (synthetic), uses
 RL: DEV (Device component use); USES (Uses)
 (particle; fluidized bed activated by excimer plasma and materials produced therefrom)
 IT **Membranes**, nonbiological
 (**polymeric**; fluidized bed activated by excimer plasma and materials produced therefrom)
 IT Amines, reactions
 Carboxylic acids, reactions
 Silanes
 RL: RGT (Reagent); RACT (Reactant or reagent)

(reagents; acrylate and methacrylate esters; fluidized bed activated by excimer plasma and materials produced therefrom)

IT Acrylic **polymers**, uses
Alcohols, uses

RL: DEV (Device component use); USES (Uses)

(reagents; fluidized bed activated by excimer plasma and materials produced therefrom)

IT 9002-86-2, Poly(vinyl chloride) 9002-88-4, Polyethylene 9002-89-5
9003-07-0, Polypropylene 9003-20-7, Polyvinyl acetate 9003-39-8,
Poly(vinylpyrrolidone) 9003-53-6, Polystyrene 9003-55-8, Styrene
butadiene **copolymer** 9011-14-7, Poly(methylmethacrylate)
24981-14-4, Poly(vinyl fluoride) 25038-54-4, Nylon 6, uses 25038-59-9,
Polyethylene **terephthalate**, uses 25087-26-7, Poly(methacrylic
acid) 32131-17-2, Nylon 6,6, uses

RL: DEV (Device component use); USES (Uses)

(beads; fluidized bed activated by excimer plasma and materials produced therefrom)

IT 7429-90-5, Aluminum, uses 7440-22-4, **Silver**, uses 7440-57-5,
Gold, uses

RL: DEV (Device component use); USES (Uses)

(electrode; fluidized bed activated by excimer plasma and materials produced therefrom)

IT 1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses
1314-61-0, Tantalum pentoxide 1332-37-2, Iron oxide, uses 1344-28-1,
Alumina, uses 7631-86-9, Silicon dioxide, uses 11105-01-4, Silicon
oxynitride 13463-67-7, Titanium dioxide, uses

RL: DEV (Device component use); USES (Uses)

(particle; fluidized bed activated by excimer plasma and materials produced therefrom)

IT 79-10-7D, Acrylic acid, epoxidized 1333-74-0, Hydrogen, reactions
7664-41-7, Ammonia, reactions 7782-44-7, Oxygen, reactions 11104-93-1,
Nitrogen oxide, reactions 12624-32-7, Sulfur oxide

RL: RGT (Reagent); RACT (Reactant or reagent)

(reagents; acrylate and methacrylate esters; fluidized bed activated by excimer plasma and materials produced therefrom)

L37 ANSWER 10 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:222028 HCAPLUS

DN 138:239183

TI **Silver** salt-containing facilitated transport **membrane**
for olefin separation having improved stability

IN Kim, Hoon Sik; Kang, Yong Soo; Lee, Byung Gwon; Lee, Hyun Joo; Ryu, Jae
Hee

PA Korea Institute of Science and Technology, S. Korea

SO U.S. Pat. Appl. Publ., 5 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

applicants

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003052056	A1	20030320	US 2002-194303	20020715
	US 6706771	B2	20040316		
	US 2004154980	A1	20040812	<u>US 2004-773257</u>	20040209
PRAI	KR 2001-42699	A	20010716		
	US 2002-194303	A3	20020715		

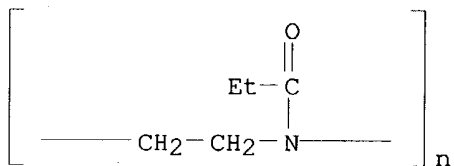
OS MARPAT 138:239183

AB The present invention relates to **polymer membranes** for
separating olefins from paraffins which have the similar mol. size and close

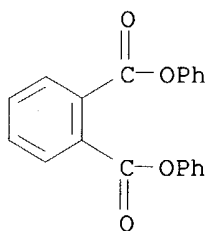
b.p. More particularly, it relates to a **silver** salt-containing facilitated transport **membrane** for olefin separation, and also a method for producing the same. An object of the present invention is to provide a **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability, and also a method for preparing the same, which exhibits no deterioration in **membrane** performance even when operated for an extended period of time. The facilitated transport **membrane** for olefin/paraffin separation of the present invention comprises a **polymer**, a **silver** salt, and a **phthalate** compound $\text{ROOC-o-C}_6\text{H}_4\text{-COOR}$, wherein R denotes an alkyl group of 2 to 8 carbon atoms or a Ph group. Thus, a **membrane** for separation propylene/propane is fabricated by coating a microporous polysulfone **membrane** with a solution containing polyvinylpyrrolidone, **silver** tetrafluoroborate, and di-Bu **phthalate**.

- IC ICM B01D071-28
- NCL 210500280; 210500300; 210500420
- CC 38-3 (**Plastics** Fabrication and Uses)
- ST **silver** salt facilitated transport **membrane** olefin sepn
- IT Polyvinyl acetals
 - RL: POF (**Polymer in formulation**); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 - (formals; production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
- IT Separation
 - (gas; production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
- IT Polysulfones, uses
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (microporous **membrane**; production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
- IT Acrylic **polymers**, uses
 - Polyamines
 - RL: POF (**Polymer in formulation**); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 - (production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
- IT Alkanes, preparation
 - Alkenes, preparation
 - RL: PUR (Purification or recovery); PREP (Preparation)
 - (production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
- IT 69488-61-5
 - RL: POF (**Polymer in formulation**); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 - (assume monomers; production of **silver** salt-containing facilitated transport **membrane** for olefin separation having improved stability)
- IT 84-62-8, Diphenylphthalate 84-74-2, Dibutylphthalate 117-84-0, Dioctylphthalate 131-11-3, Dimethylphthalate 2923-28-6, Silver trifluoromethanesulfonate 7783-93-9, Silver perchlorate 14104-20-2, Silver tetrafluoroborate 26042-63-7, Silver hexafluorophosphate 26042-64-8, Silver hexafluoroantimonate
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (production of **silver** salt-containing facilitated transport

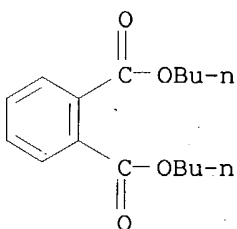
- membrane** for olefin separation having improved stability)
- IT 109-99-9, Tetrahydrofuran, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (production of **silver** salt-containing facilitated transport
membrane for olefin separation having improved stability)
- IT 9003-01-4, Polyacrylic acid 9003-20-7, Polyvinylacetate
 9003-39-8, Polyvinylpyrrolidone 9004-35-7, Cellulose acetate
 9004-36-8, Cellulose acetate butyrate 9011-14-7,
 Polymethylmethacrylate 25038-87-3, Polyvinylmethylketone
 25805-17-8, Poly(2-ethyl-2-oxazoline)
 RL: POF (**Polymer in formulation**); PRP (Properties); TEM
 (Technical or engineered material use); USES (Uses)
 (production of **silver** salt-containing facilitated transport
membrane for olefin separation having improved stability)
- IT 74-84-0P, Ethane, preparation 74-85-1P, Ethene, preparation 74-98-6P,
 Propane, preparation 106-97-8P, Butane, preparation 106-98-9P,
 1-Butene, preparation 109-66-0P, Pentane, preparation 109-67-1P,
 1-Pentene 115-07-1P, Propylene, preparation
 RL: PUR (Purification or recovery); PREP (Preparation)
 (production of **silver** salt-containing facilitated transport
membrane for olefin separation having improved stability)
- IT 69488-61-5
 RL: POF (**Polymer in formulation**); PRP (Properties); TEM
 (Technical or engineered material use); USES (Uses)
 (assume monomers; production of **silver** salt-containing facilitated
 transport **membrane** for olefin separation having improved
 stability)
- RN 69488-61-5 HCAPLUS
 CN Poly[[[(1-oxopropyl)imino](1,2-ethanediyl)] (9CI) (CA INDEX NAME)]



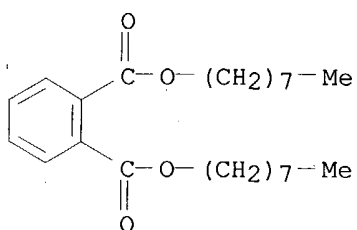
- IT 84-62-8, Diphenylphthalate 84-74-2,
 Dibutylphthalate 117-84-0, Dioctylphthalate
 131-11-3, Dimethylphthalate 2923-28-6,
 Silver trifluoromethanesulfonate 7783-93-9,
 Silver perchlorate 14104-20-2, Silver
 tetrafluoroborate 26042-63-7, Silver
 hexafluorophosphate 26042-64-8, Silver
 hexafluoroantimonate
 RL: MOA (Modifier or additive use); USES (Uses)
 (production of **silver** salt-containing facilitated transport
membrane for olefin separation having improved stability)
- RN 84-62-8 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, diphenyl ester (9CI) (CA INDEX NAME)]



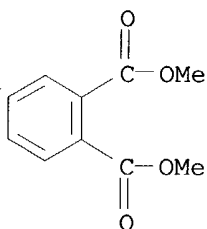
RN 84-74-2 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



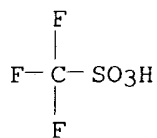
RN 117-84-0 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, dioctyl ester (9CI) (CA INDEX NAME)



RN 131-11-3 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



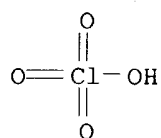
RN 2923-28-6 HCAPLUS
 CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 7783-93-9 HCAPLUS

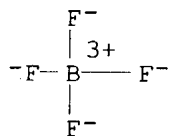
CN Perchloric acid, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS

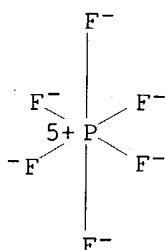
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

RN 26042-63-7 HCAPLUS

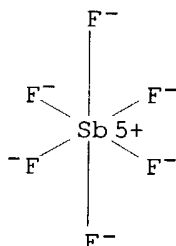
CN Phosphate(1-), hexafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

RN 26042-64-8 HCAPLUS

CN Antimonate(1-), hexafluoro-, silver(1+), (OC-6-11)- (9CI) (CA INDEX NAME)



● Ag(I) +

IT 109-99-9, Tetrahydrofuran, uses

RL: NUU (Other use, unclassified); USES (Uses)

(production of **silver** salt-containing facilitated transport
membrane for olefin separation having improved stability)

RN 109-99-9 HCAPLUS

CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)



IT 9003-01-4, Polyacrylic acid 9003-20-7, Polyvinylacetate

9003-39-8, Polyvinylpyrrolidone 9011-14-7,

Polymethylmethacrylate 25038-87-3, Polyvinylmethylketone

25805-17-8, Poly(2-ethyl-2-oxazoline)

RL: POF (Polymer in formulation); PRP (Properties); TEM

(Technical or engineered material use); USES (Uses)

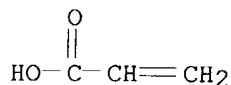
(production of **silver** salt-containing facilitated transport
membrane for olefin separation having improved stability)

RN 9003-01-4 HCAPLUS

CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7
CMF C3 H4 O2

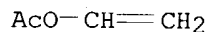


RN 9003-20-7 HCAPLUS

CN Acetic acid ethenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 108-05-4
CMF C4 H6 O2

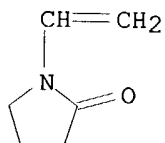


RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0
CMF C6 H9 N O

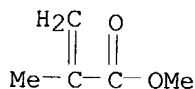


RN 9011-14-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 80-62-6
CMF C5 H8 O2



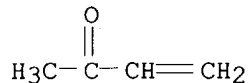
RN 25038-87-3 HCAPLUS

CN 3-Buten-2-one, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 78-94-4

CMF C4 H6 O



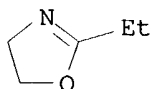
RN 25805-17-8 HCAPLUS

CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 10431-98-8

CMF C5 H9 N O



L37 ANSWER 11 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:927733 HCAPLUS

DN 138:30831

TI Flexible electrochromic structure and methods for the production thereof

IN Hourquebie, Patrick; Topart, Patrice; Pages, Hubert

PA Commissariat a l'Energie Atomique, Fr.

SO PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002097519	A2	20021205	WO 2002-FR1807	20020529
WO 2002097519	A3	20030320		
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
FR 2825481	A1	20021206	FR 2001-7144	20010531
FR 2825481	B1	20030718		
EP 1390803	A2	20040225	EP 2002-747490	20020529
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004520632	T2	20040708	JP 2003-500638	20020529
US 6798554	B2	20040928	US 2003-332979	20030123
PRAI FR 2001-7144	A	20010531		

WO 2002-FR1807 W 20020529

AB The invention relates to a flexible electrochromic structure which operates as a reflector at wavelengths ranging from (0,35) to (20) μm . The inventive structure comprises a microporous **membrane** including an electrolyte and the following items successively disposed in the following order on each of the surfaces of said microporous **membrane** in a sym. manner in relation to said **membrane**: a layer forming a reflecting electrode, an electrochromic conductive **polymer** layer, and a flexible transparent window at wavelengths ranging from (0,35) and (20) μm .

IC ICM G02F

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36

ST electrochromic device flexible **polymer**

IT **Polymers**, uses
RL: DEV (Device component use); USES (Uses)
(co-, conducting; electrochromic device with)

IT Polysulfones, uses
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(conducting; electrochromic device with)

IT Conducting **polymers**
Electrochromic devices
Electrodes
Electrolytes
Heat transfer
Optical reflectors
(electrochromic device with)

IT Acrylic **polymers**, uses
Fluoropolymers, uses
Polyamides, uses
Polycarbonates, uses
Polyesters, uses
Polyimides, uses
Polyoxyalkylenes, uses
Polyurethanes, uses
RL: DEV (Device component use); USES (Uses)
(electrochromic device with)

IT Electrooptical instruments
(electrochromic reflectors; electrochromic device with)

IT **Membranes**, nonbiological
(microporous; electrochromic device with)

IT Conducting **polymers**
(polythiophenes; electrochromic device with)

IT Metals, uses
Noble metals
RL: DEV (Device component use); USES (Uses)
(reflecting electrodes; electrochromic device with)

IT Sulfonic acids, uses
RL: DEV (Device component use); USES (Uses)
(salts, electrolyte; electrochromic device with)

IT 9033-83-4, Poly(phenylene) 25656-57-9, Poly(diphenylamine) 26747-38-6
31135-62-3D, Aminoquinoline, **polymers** 96638-49-2,
Poly(phenylene vinylene) 116267-93-7, Poly(4-aminobiphenyl)
117051-73-7, Poly(diphenyl benzidine) 142189-51-3D, derivs.
RL: DEV (Device component use); USES (Uses)
(conducting **polymer**; electrochromic device with)

IT 25233-30-1, Polyaniline 25233-34-5, Polythiophene 30604-81-0,

Polypyrrole
 RL: DEV (Device component use); USES (Uses)
 (conducting; electrochromic device with)

IT 1330-69-4, Dodecylbenzenesulfonate 16722-51-3, Tosylate, uses
 26101-52-0 27119-07-9 50851-57-5 50852-11-4, Naphthalene sulfonate
 RL: DEV (Device component use); MOA (Modifier or additive use); USES
 (Uses)
 (dopant for conducting **polymer**; electrochromic device with)

IT 733-44-8, Tetraethylammonium tosylate
 RL: CPS (Chemical process); DEV (Device component use); MOA (Modifier or
 additive use); PEP (Physical, engineering or chemical process); PROC
 (Process); USES (Uses)
 (electrochromic device with)

IT 28038-50-8, Sodium poly(4-styrenesulfonate) 126213-50-1,
 3,4-Ethylenedioxythiophene
 RL: CPS (Chemical process); PEP (Physical, engineering or chemical
 process); PROC (Process)
 (electrochromic device with)

IT 1576-84-7 9002-84-0, Poly(tetrafluoroethylene) 9002-86-2, Poly(vinyl
 chloride) 9002-88-4, Polyethylene 9002-89-5, Poly(vinyl
alcohol) 9003-07-0, Polypropylene 9003-29-6, Polybutylene
 9003-42-3, Poly(ethylmethacrylate) 9010-79-1D, fluorinated 9011-14-7,
 PMMA 25038-59-9, Polyethylene **terephthalate**, uses
 25322-68-3, Poly(ethylene glycol) 30396-85-1, Acrylonitrile-methyl
 methacrylate **copolymer**
 RL: DEV (Device component use); USES (Uses)
 (electrochromic device with)

IT 477907-15-6
 RL: DEV (Device component use); MOA (Modifier or additive use); USES
 (Uses)
 (electrochromic device with)

IT 96-48-0, Butyrolactone 96-49-1, Ethylene carbonate 108-32-7, Propylene
 carbonate 111-96-6, Diglyme 616-38-6, Dimethyl carbonate
 17009-90-4D, Imidazolium, cations 82113-65-3,
 Bis((trifluoromethyl)sulfonyl)imide 90076-65-6, Lithium
 bis((trifluoromethyl)sulfonyl)imide
 RL: DEV (Device component use); USES (Uses)
 (electrolyte; electrochromic device with)

IT 7440-06-4, Platinum, uses 7440-22-4, **Silver**, uses 7440-57-5,
 Gold, uses
 RL: DEV (Device component use); USES (Uses)
 (reflecting electrodes; electrochromic device with)

L37 ANSWER 12 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:925576 HCAPLUS
 DN 137:390839
 TI Organic electroluminescent devices and manufacture
 IN Ikuta, Shigeo
 PA Matsushita Electric Industrial Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 2002352962	A2	20021206	JP 2001-158722	20010528
PRAI	JP 2001-158722		20010528		
AB	The devices comprise: a glass substrate ; an ITO 1st electrode;				

an organic light emitting layer; a 2nd electrode comprising a matrix resin containing an elec. conductive metal oxide particle.

IC ICM H05B033-26
ICS H05B033-10; H05B033-14
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
ST org electroluminescent device
IT Electric conductivity
Electrodes
Glass **substrates**
Membranes, nonbiological
Thin film transistors
Transistors
(organic electroluminescent devices and manufacture)
IT Acrylic **polymers**, uses
Epoxy resins, uses
Oxides (inorganic), uses
Polycarbonates, uses
Polyesters, uses
Polyurethanes, uses
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices and manufacture)
IT 2085-33-8, Tris(8-quinolinolato)aluminum 7429-90-5, Aluminum, uses
7439-93-2, Lithium, uses 7440-22-4, **Silver**, uses 7789-24-4,
Lithium fluoride (LiF), uses 11100-79-1 25038-59-9,
Polyethyleneterephthalate, uses 50926-11-9, ITO 58739-36-9
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent devices and manufacture)

L37 ANSWER 13 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:833302 HCAPLUS
DN 137:351509
TI Immortal cell line derived from the grouper *Epinephelus coioides* and the applications thereof
IN Chi, Shau-Chi
PA Taiwan
SO U.S. Pat. Appl. Publ., 20 pp., Cont.-in-part of U.S. 6,436,702.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002159993	A1	20021031	US 2001-4414	20011206
	US 6436702	B1	20020820	US 1999-450696	19991130
	US 2002164787	A1	20021107	US 2001-998212	20011203
	US 6566117	B2	20030520		
PRAI	US 1998-110699P	P	19981203		
	US 1999-450696	A2	19991130		
AB	The invention comprises the generation of antibodies against nervous necrosis virus (NNV) and infectious pancreatic necrosis (IPNV) virus. The antibodies include polyclonal and monoclonal antibodies. NNV and IPNV are produced in an immortal cell line (GF-1) derived from the grouper fish <i>E. coioides</i> fin tissue, ATCC deposit number PTA-859. The present invention also provides methods for detecting viral infections in fish using enzyme immunoassay (EIA).				
IC	ICM A61K039-395				
	ICS A61K039-42; C12N005-00; C12N005-02; C12N005-06; C12N005-16				
NCL	424130100				

- CC 15-3 (Immunochemistry)
Section cross-reference(s): 9, 10, 12, 17, 63
- ST immortal cell line grouper Epinephelus antibody fish infection virus
- IT Animal cell line
(BGF-1; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Latex
(Blue, color particles; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Animal cell line
(GF-1; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Infectious pancreatic necrosis virus
(IPNV; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Animal virus
(NNV (nervous necrosis virus); immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Test kits
(SBA clonotyping system III; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Monoglycerides
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(acetates, plasticizer; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Immunostimulants
(adjuvants; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT PCR (**polymerase** chain reaction)
(amplification; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Animal virus
(aquatic; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Epinephelus awoara
(banded grouper; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Drug delivery systems
(carriers, solid; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

- immunoassay)
- IT Drug delivery systems
 - (enteric coating; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Immunoassay
 - (enzyme-linked immunosorbent assay; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Immunoassay
 - (enzyme; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Anarhichas minor
- Ascites
- Brain
- Cyprinus
- Diagnosis
- Eel
- Eel herpes virus Formosa
- Epinephelus coioides
- Fish
- Grouper
- Halibut
- Hard clam reovirus
- Hybridoma
- Intestine
- Lates calcarifer
- Lubricants
- Mus
- Oryctolagus cuniculus
- Pancreas
- Parrot fish
- Perca
- Pike
- Plasticizers
- Salmon
- Sea bass
- Spinal cord
- Striped jack
- Takifugu rubripes
- Trout
- Turbot
- Verasper moseri
 - (immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Antibodies and Immunoglobulins
 - RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); DGN (Diagnostic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 - (immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Immunoassay
 - (immunoblotting; immortal cell line derived from grouper fish Epinephelus coioides and applications thereof in preparation of fish virus

- antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Immunoassay
(immunofluorescent immunostaining; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Vaccines
(killed, oral; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Polyamides, analysis
Polyesters, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(**membranes**, solid carriers; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Antibodies and Immunoglobulins
RL: BPN (Biosynthetic preparation); BUU (Biological use, unclassified); DGN (Diagnostic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Castor oil
Paraffin oils
Polyoxyalkylenes, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(plasticizer; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT Filter paper
Membranes, nonbiological
(solid carriers; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT 9041-22-9, β Glucan
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(adjuvant; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT 9002-89-5, Polyvinyl **alcohol** 9005-25-8, Starch, biological studies
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(binder; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)
- IT 7440-22-4, **Silver**, analysis 7440-57-5, Gold, analysis
7782-49-2, Selenium, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(color particles; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

- IT 9001-78-9
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (detection agent; immortal cell line derived from grouper fish
 Epinephelus coioides and applications thereof in preparation of fish virus
 antibodies and detection of viral infection in fish using enzyme
 immunoassay)
- IT 63-42-3, Lactose
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (diluent; immortal cell line derived from grouper fish Epinephelus
 coioides and applications thereof in preparation of fish virus antibodies
 and detection of viral infection in fish using enzyme immunoassay)
- IT 9063-38-1, Sodium starch glycolate
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (disintegrant; immortal cell line derived from grouper fish Epinephelus
 coioides and applications thereof in preparation of fish virus antibodies
 and detection of viral infection in fish using enzyme immunoassay)
- IT 77-94-1, Tributyl citrate 9004-38-0, Cellulose acetate **phthalate**
 9050-31-1, Hydroxypropylmethyl cellulose **phthalate** 37205-99-5,
 Carboxymethylethyl cellulose 52907-01-4, Cellulose acetate trimellitate
 53237-50-6 71138-97-1, Hydroxypropylmethyl cellulose acetate succinate
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (enteric coating; immortal cell line derived from grouper fish
 Epinephelus coioides and applications thereof in preparation of fish virus
 antibodies and detection of viral infection in fish using enzyme
 immunoassay)
- IT 9003-99-0, Peroxidase
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (horseradish, detection agent; immortal cell line derived from grouper
 fish Epinephelus coioides and applications thereof in preparation of fish
 virus antibodies and detection of viral infection in fish using enzyme
 immunoassay)
- IT 557-04-0, Magnesium stearate
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (lubricant; immortal cell line derived from grouper fish Epinephelus
 coioides and applications thereof in preparation of fish virus antibodies
 and detection of viral infection in fish using enzyme immunoassay)
- IT 9004-70-0, Nitrocellulose
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (**membranes**, solid carriers; immortal cell line derived from
 grouper fish Epinephelus coioides and applications thereof in preparation of
 fish virus antibodies and detection of viral infection in fish using
 enzyme immunoassay)
- IT 56-81-5, Glycerol, biological studies 60-01-5, Glycerol tributyrates
 77-90-7, Acetyl tributyl citrate 77-93-0, Triethyl citrate 84-66-2,
 Diethyl **phthalate** 84-74-2, Dibutyl **phthalate**
 102-76-1, Triacetin 109-43-3, Dibutyl sebacate 110-27-0, Isopropyl
 myristate 112-80-1, Oleic acid, biological studies 9003-39-8, PVPK-90
 25322-68-3, PEG 25322-69-4, Polypropylene glycol 31566-31-1, Glycerol
 monostearate
 RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (plasticizer; immortal cell line derived from grouper fish Epinephelus
 coioides and applications thereof in preparation of fish virus antibodies
 and detection of viral infection in fish using enzyme immunoassay)
- IT 34314-06-2, Tetramethyl benzidine

RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
 (reagent; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9012-36-6, Agarose

RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (solid carriers; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

IT 474566-61-5 474566-62-6

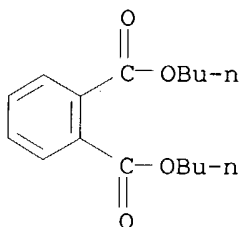
RL: PRP (Properties)
 (unclaimed sequence; immortal cell line derived from the grouper *Epinephelus coioides* and the applications thereof)

IT 84-74-2, Dibutyl **phthalate**

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (plasticizer; immortal cell line derived from grouper fish *Epinephelus coioides* and applications thereof in preparation of fish virus antibodies and detection of viral infection in fish using enzyme immunoassay)

RN 84-74-2 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 14 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:482697 HCAPLUS

DN 137:47996

TI Polymer composites containing nanometer metal granules and manufacturing methods therefor

IN Won, Jeon Ok; Kang, Yon Soo; Chung, Bom Sok; Yoon, Yo Sang

PA Korea Institute of Science and Technology, S. Korea

SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002179931	A2	20020626	JP 2001-2447	20010110
	US 2002145132	A1	20021010	US 2001-840138	20010424
	US 6712997	B2	20040330		
PRAI	KR 2000-72958	A	20001204		
AB	Metal precursors are dispersed in polymer matrixes and irradiated with light to reduce to metals. Thus, a poly(2-ethyl-2-oxazoline) film containing AgCF3SO3 was irradiated with UV.				
IC	ICM C08L101-02				
	ICS C08J003-20; C08J007-00; C08K003-08				

CC 37-6 (**Plastics** Manufacture and Processing)

ST polyethyloxazoline silver composite; UV radiation polyethyloxazoline silver fluoromethanesulfonate film

IT Dendritic polymers
 RL: **POF (Polymer in formulation)**; USES (Uses)
 (hyperbranched; polymer composites containing nanometer metal granules)

IT Polymers, uses
 RL: **POF (Polymer in formulation)**; USES (Uses)
 (linear; polymer composites containing nanometer metal granules)

IT Polyamines
 RL: **POF (Polymer in formulation)**; PRP (Properties); TEM
 (Technical or engineered material use); USES (Uses)
 (polyamide-; polymer composites containing nanometer metal granules)

IT Polyamides, properties
 RL: **POF (Polymer in formulation)**; PRP (Properties); TEM
 (Technical or engineered material use); USES (Uses)
 (polyamine-; polymer composites containing nanometer metal granules)

IT Dispersion (of materials)
 Light
 Nanocomposites
 Plastic films
 Reduction, photochemical
 UV radiation
 (polymer composites containing nanometer metal granules)

IT Metals, preparation
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP
 (Preparation); USES (Uses)
 (polymer composites containing nanometer metal granules)

IT Reinforced plastics
 RL: IMF (Industrial manufacture); **POF (Polymer in formulation)**;
 PRP (Properties); PREP (Preparation); USES (Uses)
 (polymer composites containing nanometer metal granules)

IT Alloys, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (polymer composites containing nanometer metal granules)

IT Polyamides, uses
 RL: **POF (Polymer in formulation)**; USES (Uses)
 (polymer composites containing nanometer metal granules)

IT Polycarbonates, uses
 RL: **POF (Polymer in formulation)**; USES (Uses)
 (polymer composites containing nanometer metal granules)

IT Polyesters, uses
 RL: **POF (Polymer in formulation)**; USES (Uses)
 (polymer composites containing nanometer metal granules)

IT Dendritic polymers
 Polyoxyalkylenes, properties
 RL: **POF (Polymer in formulation)**; PRP (Properties); TEM
 (Technical or engineered material use); USES (Uses)
 (polymer composites containing nanometer metal granules)

IT Oxides (inorganic), reactions
 Salts, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (polymer composites containing nanometer metal granules)

IT 7439-89-6P, Iron, preparation 7440-22-4P, Silver, preparation
 7440-48-4P, Cobalt, preparation 7440-57-5P, Gold, preparation
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP
 (Preparation); USES (Uses)
 (polymer composites containing nanometer metal granules)

IT 7439-96-5, Manganese, uses 7440-00-8, Neodymium, uses 7440-02-0,

Nickel, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-10-0, Praseodymium, uses 7440-19-9, Samarium, uses 7440-21-3, Silicon, uses 7440-32-6, Titanium, uses 7440-50-8, Copper, uses 7440-54-2, Gadolinium, uses 7440-67-7, Zirconium, uses
 RL: MOA (Modifier or additive use); USES (Uses)

(polymer composites containing nanometer metal granules)

IT 9002-86-2, PVC 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-29-6, Polybutylene 9003-53-6, Polystyrene 9010-79-1, Ethylene-propylene copolymer 9011-14-7, Polymethyl methacrylate 24968-12-5, Poly(butylene terephthalate) 25038-54-4, Nylon 6, uses 25038-59-9, Pet polyester, uses 25068-26-2, Poly(4-methyl-1-pentene) 25212-15-1, Polypentadiene 26062-94-2, Poly(butylene terephthalate) 61722-01-8, Butene-ethylene-propylene copolymer
 RL: POF (Polymer in formulation); USES (Uses)

(polymer composites containing nanometer metal granules)

IT 9003-39-8, Poly(vinylpyrrolidone) 25322-68-3, Polyethylene oxide 25805-17-8, Poly(2-ethyl-2-oxazoline)
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(polymer composites containing nanometer metal granules)

IT 2923-28-6, Silver trifluoromethanesulfonate 7646-79-9, Cobaltous chloride, reactions 7758-94-3, Ferrous chloride 7761-88-8, Silver nitrate, reactions 7783-93-9, Silver perchlorate 14104-20-2, Silver borofluoride 16903-35-8
 RL: RCT (Reactant); RACT (Reactant or reagent)

(polymer composites containing nanometer metal granules)

IT 9011-14-7, Polymethyl methacrylate
 RL: POF (Polymer in formulation); USES (Uses)

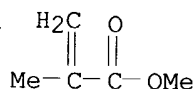
(polymer composites containing nanometer metal granules)

RN 9011-14-7 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 80-62-6

CMF C5 H8 O2



IT 9003-39-8, Poly(vinylpyrrolidone) 25805-17-8, Poly(2-ethyl-2-oxazoline)

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(polymer composites containing nanometer metal granules)

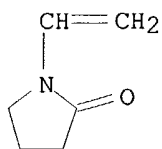
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

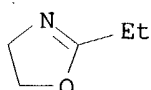
CM 1

CRN 88-12-0

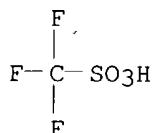
CMF C6 H9 N O



RN 25805-17-8 HCAPLUS
 CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 10431-98-8
 CMF C5 H9 N O

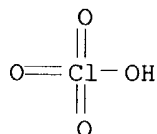


IT 2923-28-6, Silver trifluoromethanesulfonate 7783-93-9,
 Silver perchlorate 14104-20-2, Silver borofluoride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (polymer composites containing nanometer metal granules)
 RN 2923-28-6 HCAPLUS
 CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



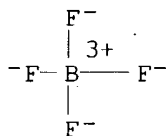
● Ag(I)

RN 7783-93-9 HCAPLUS
 CN Perchloric acid, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

RN 14104-20-2 HCAPLUS
 CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

L37 ANSWER 15 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:314825 HCAPLUS
 DN 136:327629
 TI Flexible and porous **membranes** and adsorbents, and **method**
 for their production
 IN Noack, Andreas
 PA Germany
 SO PCT Int. Appl., 61 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002032558	A1	20020425	WO 2001-EP12131	20011019
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	DE 10051910	A1	20020502	DE 2000-10051910	20001019
	EP 1372832	A1	20040102	EP 2001-978441	20011019
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004524945	T2	20040819	JP 2002-535791	20011019
PRAI	DE 2000-10051910	A	20001019		
	WO 2001-EP12131	W	20011019		

AB The invention relates to a method for producing flexible and porous adsorbents based on oxidic and/or non-oxidic ceramic material including carbon. A flat base matrix is produced on a paper producing machine, whose components are held together essentially by hydrogen bridge bonds. **Polymeric** additives are applied and/or impregnated onto one or both sides of the surface of the base matrix. The base matrix is treated under pyrolytic conditions at an increased temperature in an atmospheric containing essentially no oxygen. This **method** can also **produce membranes** of flexible material for their use to sep. and/or purify liqs. This invention provides **membranes** and **membrane substrates** with high packing d. while at the same time providing optimal flow-through profiles and that are not dependent on the carrier despite low thickness and low material transport resistance. The manufacturing

process provides thin flat, stable and flexible materials, which enable inexpensive and precise **production** of **membranes** with defined material separation properties.

- IC ICM B01D069-12
- ICS B01D071-02; B01D053-22; C04B041-50; D01F009-14
- CC 48-1 (Unit Operations and Processes)
- Section cross-reference(s): 59
- ST **membrane** flexible porous ceramic **manuf**
- IT Nanotubes
 - (carbon; flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Cannabis sativa
- Cocos nucifera
 - (fiber; flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Agave fourcroydes
- Bagasse
- Linters
- Medicago sativa
- Musa textilis
- Phormium
- Stipa tenacissima
- Straw
 - (fibers; flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Plastics, uses
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (fibers; flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Adsorbents
- Boehmeria nivea
- Ceiba pentandra
- Ceramics
- Coir
- Corchorus
- Cotton fibers
- Hibiscus cannabinus
- Hibiscus sabdariffa
- Linum usitatissimum
- Membranes**, nonbiological
- Mineral wool
- Paper
- Pitch
- Soot
- Urena
- Viscose
 - (flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Silanes
- RL: RCT (Reactant); RACT (Reactant or reagent)
 - (flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Acrylic **polymers**, uses
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Asbestos
- RL: TEM (Technical or engineered material use); USES (Uses)
 - (flexible and porous **membranes** and adsorbents, and

method for their production)

IT Asphalt
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Carbon fibers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Epoxy resins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Fibers
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Fullerenes
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Glass fibers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Kaolin, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Metallic fibers
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Phenolic resins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Polyamides, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Polycarbonates, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Polyesters, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Polysaccharides, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Polysiloxanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and
 method for their production)

IT Polyurethanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)

- (flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Rubber, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Sisal
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Zeolites (synthetic), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Textiles
 (linen; flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Phenolic resins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (novolak; flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Wood
 (pine, fibers; flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT Synthetic fibers
 RL: TEM (Technical or engineered material use); USES (Uses)
 (quartz; flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT 75-78-5, Dichlorodimethylsilane 75-79-6, Methyltrichlorosilane
 78-10-4, Tetraethoxysilane 7664-41-7, Ammonia, reactions 7705-07-9,
 Titanium chloride, reactions 7803-62-5, Silane, reactions 10294-34-5,
 Boron chloride 13709-77-8 415706-71-7
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (flexible and porous **membranes** and adsorbents, and **method** for their production)
- IT 409-21-2, Silicon carbide, uses 1344-28-1, Alumina, uses 7440-05-3,
 Palladium, uses 7440-06-4, Platinum, uses 7440-22-4, **Silver**,
 uses 7440-44-0, Carbon, uses 7440-57-5, Gold, uses 7631-86-9,
 Silica, uses 9002-88-4, Polyethylene 9002-89-5, Polyvinyl
alcohol 9003-07-0, Polypropylene 9003-31-0, Polyisoprene
 9003-53-6, Polystyrene 9003-55-8, Butadiene styrene **copolymer**
 9004-34-6, Cellulose, uses 9004-34-6D, Cellulose, esters and ethers
 9004-35-7, Cellulose acetate 9005-25-8, Starch, uses 9005-32-7,
 Alginic acid 9005-53-2, Lignin, uses 9005-82-7, Amylose 9010-98-4,
 Polychloroprene 10043-11-5, Boron nitride, uses 12194-71-7, Perovskite
 25014-41-9, Polyacrylonitrile 25038-59-9, Polyethylene
terephthalate, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (flexible and porous **membranes** and adsorbents, and **method** for their production)
- RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 16 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:314493 HCAPLUS
 DN 136:306396
 TI Ion selective monoelectrode complex
 IN Terashima, Masaaki; Seshimoto, Osamu
 PA Fuji Photo Film Co., Ltd., Japan

SO Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1199559	A2	20020424	EP 2001-124264	20011017
	EP 1199559	A3	20040128		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2002122563	A2	20020426	JP 2000-316977	20001017
	US 2002063058	A1	20020530	US 2001-981528	20011017
	US 6767578	B2	20040727		
PRAI	JP 2000-316977	A	20001017		

AB The invention concerns an ion selective monoelectrode complex which is favorably employable to manufacture an ion activity measuring apparatus, has on a

common non-electroconductive **support** sheet, plural ion selective monoelectrodes each of which is composed of an electrode composite consisting of, in order, a **silver** metal layer, a **silver** halide layer, an electrolytic material layer, and an ion selective **membrane**, and an electroconductive terminal which is elec. connected to the **silver** metal layer and which has an exposed surface, under the condition that the ion selective monoelectrodes are aligned, without elec. contact with each other, along an imaginary line bridging the electrode composite and the electroconductive terminal. Diagrams describing the apparatus assembly and operation are given.

IC ICM G01N027-30

CC 9-1 (Biochemical Methods)

ST ion monoelectrode app sodium potassium chloride **polymer** film **membrane**

IT Analytical apparatus

Electrodes

Films

Ion-selective electrodes

Ions

Membranes, nonbiological

(ion selective monoelectrode complex)

IT Polyesters, uses

Polymers, uses

RL: DEV (Device component use); USES (Uses)

(ion selective monoelectrode complex)

IT **Silver** halides

RL: DEV (Device component use); PRP (Properties); USES (Uses)

(ion selective monoelectrode complex)

IT **Membranes**, nonbiological

(ion-selective; ion selective monoelectrode complex)

IT Metals, uses

RL: DEV (Device component use); PRP (Properties); USES (Uses)

(silver; ion selective monoelectrode complex)

IT 16887-00-6, Chloride ion, analysis 17341-25-2, Sodium ion, analysis

24203-36-9, Potassium ion, analysis

RL: ANT (Analyte); PRP (Properties); ANST (Analytical study)

(ion selective monoelectrode complex)

IT 9003-22-9, Vinyl chloride vinyl acetate **copolymer** 25038-59-9,Polyethylene **terephthalate**, uses

RL: DEV (Device component use); USES (Uses)

(ion selective monoelectrode complex)

- IT 7440-22-4, **Silver**, uses
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (ion selective monoelectrode complex)
- IT 78-93-3, Methyl ethyl ketone, uses 108-88-3, Toluene, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (ion selective monoelectrode complex)
- L37 ANSWER 17 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2002:242885 HCAPLUS
 DN 136:386866
 TI Effect of plasticizers on the formation of silver nanoparticles in polymer
 electrolyte membranes for olefin/paraffin separation
 AU Jose, Binoy; Ryu, Jae Hee; Kim, Yong Jin; Kim, Honggon; Kang, Yong Soo;
 Lee, Sang Deuk; Kim, Hoon Sik
 CS CFC Alternatives Research Center and Center for Facilitated Transport
 Membrane, Korea Institute of Science and Technology, Seongbukgu Seoul,
 136-791, S. Korea
 SO Chemistry of Materials (2002), 14(5), 2134-2139
 CODEN: CMATEX; ISSN: 0897-4756
 PB American Chemical Society
 DT Journal
 LA English
 AB The effect of plasticizers such as dioctyl **phthalate**, di-Ph
phthalate, dioctyl **terephthalate**, ethylene carbonate,
 glycerol, and sucrose on the performance and stability of polymer
 electrolyte membranes consisting of AgBF₄ and poly(vinylpyrrolidone) (PVP)
 or poly(2-ethyl-2-oxazoline) (POZ) has been investigated for the separation of
 propylene/propane gas mixts. The mixed gas permeance and selectivities
 for propylene over propane on AgBF₄-PVP and AgBF₄-POZ membranes without a
 plasticizer continuously decreased with time due to the reduction of silver
 ions in the membrane. Reduction of silver ions to silver nanoparticles in
 AgBF₄-PVP membrane was confirmed by transmission electron microscopic
 anal. Among the plasticizers tested, the presence of dioctyl or di-Ph
phthalate was found to improve the stability and performance of
 the membranes significantly. On the other hand, the performance of the
 membranes containing glycerol or sucrose as a plasticizer rapidly deteriorated
 even faster than that of the membranes without a plasticizer. Anal. of
 the membranes shows that the rate of silver nanoparticle formation is
 greatly reduced by the addition of a **phthalate**, but accelerated by
 the presence of glycerol.
- CC 37-6 (Plastics Manufacture and Processing)
 Section cross-reference(s): 38
- ST silver nanoparticle membrane permeability selectivity sepn propylene
 propane; dioctyl diphenyl **phthalate** plasticizer permselective
 membrane polyvinylpyrrolidone polyoxazoline prepn
- IT Nanoparticles
 Particle size distribution
 Plasticizers
 Polymer electrolytes
 (effect of plasticizers on the formation of silver nanoparticles in
 polymer electrolyte membranes for olefin/paraffin separation)
- IT Polyamines
 RL: DEV (Device component use); POF (Polymer in formulation);
 PRP (Properties); USES (Uses)
 (effect of plasticizers on the formation of silver nanoparticles in
 polymer electrolyte membranes for olefin/paraffin separation)
- IT Membranes, nonbiological
 (permselective; formation of silver nanoparticles in polymer
 electrolyte membranes for olefin/paraffin separation)

applicant

IT Permeability
(selective; effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)

IT 9003-39-8, Polyvinylpyrrolidone 25805-17-8,
Poly(2-ethyl-2-oxazoline) 69488-61-5
RL: DEV (Device component use); POF (Polymer in formulation);
PRP (Properties); USES (Uses)
(effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)

IT 14104-20-2, Silver tetrafluoroborate
RL: MOA (Modifier or additive use); USES (Uses)
(effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)

IT 56-81-5, Glycerol, uses 57-50-1, Sucrose, uses 84-62-8,
Diphenyl phthalate 96-49-1, Ethylene carbonate 117-81-7,
Diethyl phthalate 4654-26-6, Diethyl terephthalate
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizer; effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)

IT 74-98-6, Propane, processes 115-07-1, Propylene, processes
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(silver nanoparticles in polymer electrolyte membranes for separation of propylene/propane gas mixts)

IT 9003-39-8, Polyvinylpyrrolidone 25805-17-8,
Poly(2-ethyl-2-oxazoline) 69488-61-5
RL: DEV (Device component use); POF (Polymer in formulation);
PRP (Properties); USES (Uses)
(effect of plasticizers on the formation of silver nanoparticles in polymer electrolyte membranes for olefin/paraffin separation)

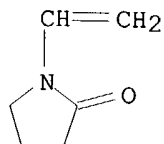
RN 9003-39-8 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 88-12-0

CMF C6 H9 N O



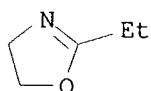
RN 25805-17-8 HCAPLUS

CN Oxazole, 2-ethyl-4,5-dihydro-, homopolymer (9CI) (CA INDEX NAME)

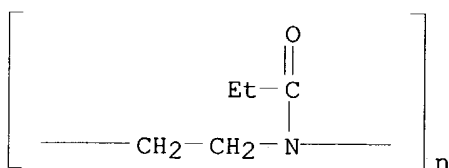
CM 1

CRN 10431-98-8

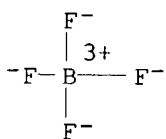
CMF C5 H9 N O



RN 69488-61-5 HCAPLUS
CN Poly[[[(1-oxopropyl)imino](1,2-ethanediyl)] (9CI) (CA INDEX NAME)

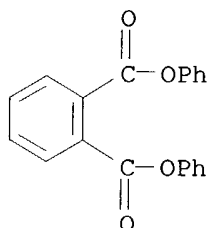


IT 14104-20-2, Silver tetrafluoroborate
RL: MOA (Modifier or additive use); USES (Uses)
(effect of plasticizers on the formation of silver nanoparticles in
polymer electrolyte membranes for olefin/paraffin separation)
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IT 84-62-8, Diphenyl phthalate
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizer; effect of plasticizers on the formation of silver
nanoparticles in polymer electrolyte membranes for olefin/paraffin
separation)
RN 84-62-8 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, diphenyl ester (9CI) (CA INDEX NAME)



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

L37 ANSWER 18 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2001:851489 HCAPLUS
 DN 135:380341
 TI Ion-selective solid-state **polymeric membrane**
 electrodes
 IN Ramamurthy, Narayanan; Meyerhoff, Mark E.; Baugh, Robert P.; Larkin, Colin
 P.
 PA Medtronic, Inc., USA; The Regents of the University of Michigan
 SO PCT Int. Appl., 35 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001088520	A2	20011122	WO 2001-US16165	20010516
	WO 2001088520	A3	20021017		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,				
	HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,				
	LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO,				
	RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN,				
	YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				
	DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,				
	BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1287345	A2	20030305	EP 2001-939132	20010516
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003533694	T2	20031111	JP 2001-584865	20010516
PRAI	US 2000-573378	A	20000518		
	WO 2001-US16165	W	20010516		
AB	An improved ion-sensing electrode for detecting ions or polyions is provided having an elec. conducting member sheathed or coated with a layer of insulation except at an exposed, uninsulated area, where the insulation free surface of the elec. conducting member is texturized, and a polymeric membrane coated on the insulation-free surface of the elec. conducting member, where the ion selective membrane includes an ionophore. The texturized surface improves the starting EMF stability and reproducibility of the ion-sensing electrodes, and further improves membrane adherence to the elec. conducting member.				
IC	ICM G01N027-00				
CC	79-2 (Inorganic Analytical Chemistry)				
	Section cross-reference(s): 9, 38				
ST	ion selective solid state polymeric membrane electrode				
IT	Urethane rubber, analysis				
	RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)				
	(Pellethane; ion-selective solid-state polymeric membrane electrodes)				
IT	Blood analysis				
	Body fluid				
	Buffers				
	Cation exchangers				
	Ion-selective electrodes				
	Ionophores				
	Membrane electrodes				
	Physiological saline solutions				

Ag⁺ 7

Plasticizers
(ion-selective solid-state **polymeric membrane** electrodes)

IT Peptides, analysis
Protamines
RL: ANT (Analyte); ANST (Analytical study)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Sulfonates
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Borates
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Phosphates, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Polyurethanes, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Quaternary ammonium compounds, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Silicone rubber, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)
(ion-selective solid-state **polymeric membrane** electrodes)

IT Cations
(polyvalent; ion-selective solid-state **polymeric membrane** electrodes)

IT 9004-07-3, Chymotrypsin 9015-94-5, Renin, analysis 24937-47-1, Poly(arginine) 25104-18-1, Poly(lysine) 25212-18-4, Poly(arginine) 28728-55-4, Polybrene 38000-06-5, Poly(lysine) 62238-80-6D, quaternized
RL: ANT (Analyte); ANST (Analytical study)
(ion-selective solid-state **polymeric membrane** electrodes)

IT 57-09-0, Hexadecyltrimethylammonium bromide 64-20-0, Tetramethylammonium bromide 78-42-2, Tris(2-ethylhexyl) phosphate **84-74-2**, Dibutyl **phthalate** 103-23-1, Dioctyl adipate 103-50-4, Benzyl ether 109-43-3, Dibutyl sebacate 112-30-1, 1-Decanol 117-81-7, Dioctyl **phthalate** 122-62-3, Dioctyl sebacate 138-24-9, Trimethylphenylammonium chloride 143-66-8, Sodium tetraphenylborate 311-28-4, Tetrabutylammonium iodide 866-97-7, Tetrapentylammonium bromide 1010-19-1, Triethylphenylammonium iodide 1754-47-8, Dioctylphenyl phosphonate 2567-83-1, Tetraethylammonium perchlorate 3700-67-2, Dimethyldioctadecylammonium bromide 5137-55-3, Trioctylmethylammonium chloride 7173-54-8, Tridodecylmethylammonium

chloride 7429-90-5, Aluminum, analysis 7439-88-5, Iridium, analysis 7439-89-6, Iron, analysis 7440-02-0, Nickel, analysis 7440-05-3, Palladium, analysis 7440-06-4, Platinum, analysis 7440-22-4, **Silver**, analysis 7440-50-8, Copper, analysis 7440-57-5, Gold, analysis 9000-07-1, Carrageenan 9002-86-2, Polyvinyl chloride 9004-32-4, Carboxymethyl cellulose 9005-49-6, Heparin, analysis 9007-28-7, Chondroitin sulfate 9012-09-3, Cellulose triacetate 9041-08-1, Ardeparin sodium 9050-30-0, Heparan sulfate 10521-91-2, 5-Phenyl-1-pentanol 12597-68-1, Stainless steel, analysis 14680-77-4, Potassium tetrakis(4-chlorophenyl) borate 14866-33-2, Tetraoctylammonium bromide 15477-76-6, Phosphonate 24967-94-0, Dermatan sulfate 25190-06-1 25322-17-2 25822-51-9, Vinyl **alcohol**-vinyl chloride **copolymer** 37682-29-4, 2-Nitrophenyl octyl ether 39317-41-4 40038-00-4 40835-97-0 79060-88-1, Sodium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate 105560-52-9, Potassium tetrakis[3,5-bis(trifluoromethyl)phenyl]borate 106327-92-8 121504-53-8, Tetraphenylammonium tetraphenyl borate 288574-52-7, M48 374075-01-1 374075-05-5

RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(ion-selective solid-state **polymeric membrane** electrodes)

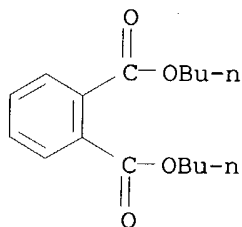
IT **84-74-2, Dibutyl phthalate**

RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(ion-selective solid-state **polymeric membrane** electrodes)

RN 84-74-2 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 19 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:840754 HCAPLUS

DN 135:358994

TI Electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance

IN Aoki, Takao; Kondo, Koji; Tajika, Hiroshi

PA Toyobo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001319524	A2	20011116	JP 2000-138794	20000511
PRAI	JP 2000-138794		20000511		
AB	The pastes, useful for membrane circuits, comprise				

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

electroconductive powders, **solvents**, and binders containing polyesters with Mn ≥ 3000 , wherein the polyesters comprise aliphatic glycols having C ≥ 5 -main chains and/or alicyclic glycols, 5-80 weight% aliphatic polycarbonate diols, and acid components containing ≥ 70 mol% aromatic dicarboxylic acids. Thus, a paste containing **Ag** and di-Me **isophthalate**-dimethyl **terephthalate**-HDI biuret-1,5-pentanediol-poly(hexamethylene carbonate) **copolymer** was applied on a PET film to give a test piece.

- IC ICM H01B001-22
- ICS C08K003-00; C08K005-00; C08L067-00; H01B001-24
- CC 38-3 (**Plastics** Fabrication and Uses)
Section cross-reference(s): 76
- ST electroconductive paste polyester polycarbonate flexible circuit; cold bending strength electroconductive paste polyester
- IT Carbon black, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(Ketjenblack; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)
- IT Binders
Electrically conductive pastes
(electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)
- IT Printed circuit boards
(flexible; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)
- IT Polyesters, uses
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polycarbonate-, binder; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)
- IT Polycarbonates, uses
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyester-, binder; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)
- IT 208725-73-9P 373378-30-4P 373378-31-5P 373378-32-6P
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(binder; electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)
- IT 7440-22-4, **Silver**, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(electroconductive pastes containing polycarbonate-polyesters with good cold bending strength and heat resistance)

- L37 ANSWER 20 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
- AN 2001:751971 HCAPLUS
- DN 136:86757
- TI Effect of **phthalates** on the stability and performance of AgBF₄-PVP membranes for olefin/paraffin separation
- AU Jose, Binoy; Ryu, Jae Hee; Lee, Byung Gwon; Lee, Hyunjo; Kang, Yong Soo; Kim, Hoon Sik
- CS CFC Alternatives Research Center, Korea Institute of Science and Technology, Seongbukgu, Seoul, 136-791, S. Korea
- SO Chemical Communications (Cambridge, United Kingdom) (2001), (20),

2046-2047

CODEN: CHCOFS; ISSN: 1359-7345

PB Royal Society of Chemistry

DT Journal

LA English

AB The presence of **phthalate** plasticizers in dry polymer membranes consisting of poly(N-vinylpyrrolidone) (PVP) and AgBF₄ provides long-term stability and better performance for the separation of propylene/propane gas mixts.

CC 38-3 (**Plastics** Fabrication and Uses)

Section cross-reference(s): 35

ST **phthalate** plasticized polyvinylpyrrolidone membrane propylene propane sepn

IT Membranes, nonbiological

Plasticizers

(effect of **phthalate** plasticizers on performance of AgBF₄-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)

IT 84-62-8, Diphenyl **phthalate** 84-74-2, Dibutyl

phthalate 117-81-7, DOP

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)

(effect of **phthalate** plasticizers on performance of AgBF₄-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)

IT 14104-20-2, Silver tetrafluoroborate

RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(effect of **phthalate** plasticizers on performance of AgBF₄-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)

IT 115-07-1P, Propylene, processes

RL: PEP (Physical, engineering or chemical process); PUR (Purification or recovery); PYP (Physical process); PREP (Preparation); PROC (Process)

(effect of **phthalate** plasticizers on performance of AgBF₄-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)

IT 74-98-6, Propane, processes

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); REM (Removal or disposal); PROC (Process)

(effect of **phthalate** plasticizers on performance of AgBF₄-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)

IT 9003-39-8, Poly(N-vinylpyrrolidone)

RL: POF (**Polymer in formulation**); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(effect of **phthalate** plasticizers on performance of AgBF₄-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)

IT 84-62-8, Diphenyl **phthalate** 84-74-2, Dibutyl

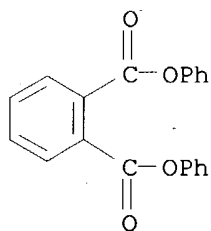
phthalate

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)

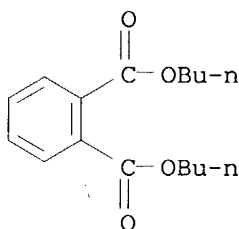
(effect of **phthalate** plasticizers on performance of AgBF₄-containing poly(vinylpyrrolidone) membranes for propane/propylene mixture separation)

RN 84-62-8 HCAPLUS

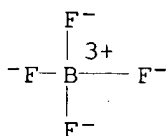
CN 1,2-Benzenedicarboxylic acid, diphenyl ester (9CI) (CA INDEX NAME)



RN 84-74-2 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



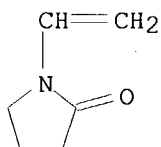
IT 14104-20-2, Silver tetrafluoroborate
RL: MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(effect of **phthalate** plasticizers on performance of
AgBF₄-containing poly(vinylpyrrolidone) membranes for propane/propylene
mixture separation)
RN 14104-20-2 HCAPLUS
CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IT 9003-39-8, Poly(N-vinylpyrrolidone)
RL: POF (**Polymer in formulation**); PRP (Properties); TEM
(Technical or engineered material use); USES (Uses)
(effect of **phthalate** plasticizers on performance of
AgBF₄-containing poly(vinylpyrrolidone) membranes for propane/propylene
mixture separation)
RN 9003-39-8 HCAPLUS
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)
CM 1
CRN 88-12-0

CMF C6 H9 N O



RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 21 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:661712 HCAPLUS
DN 135:223737
TI Electrode device with a solid state reference system of sodium vanadium bronze
IN Sorensen, Poul Ravn; Zachau-christiansen, Birgit
PA Radiometer Medical A/s, Den.
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001065247	A1	20010907	WO 2001-DK139	20010301
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	EP 1269172	A1	20030102	EP 2001-909570	20010301
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
	JP 2003525450	T2	20030826	JP 2001-563894	20010301
	US 2004163949	A1	20040826	US 2002-233819	20020829
	US 6805781	B2	20041019		
PRAI	DK 2000-327	A	20000301		
	WO 2001-DK139	W	20010301		
AB	The invention concerns an electrode device comprising an ion selective material, a solid state, inner reference system of sodium vanadium bronze and a contact material, where sodium may be reversibly intercalated in the bronze. Such an electrode device may for instance be sensitive to ions, such as H ⁺ , Na ⁺ , K ⁺ , and Ca ²⁺ . It may also include a reactive material in which a particular analyte is reacted to form an ion product, to which the ion selective material is sensitive, such as in electrode devices of the Severinghaus-type or in biosensors. The electrode device according to the invention can be prepared by thick film printing.				
IC	ICM G01N027-327				
CC	9-1 (Biochemical Methods)				
	Section cross-reference(s): 72, 79				
ST	electrode device solid state ref system; sodium vanadium bronze ref system electrode; ion sensitive electrode sensor; biosensor electrode solid state ref				
IT	Ion-selective electrodes (ammonium-selective; electrode device with solid state reference system of sodium vanadium bronze)				
IT	Gases (barrier permeable to; electrode device with solid state reference system of				

- sodium vanadium bronze)
- IT Ion-selective electrodes
 - (cadmium-selective; electrode device with solid state reference system of sodium vanadium bronze)
- IT Binders
- Blood analysis
- Electrodes
- Electrolytes
- Electronic device fabrication
- Enzyme electrodes
- Ion-selective electrodes
- Ions
- Reference electrodes
- pH
 - (electrode device with solid state reference system of sodium vanadium bronze)
- IT Enzymes, uses
- Reagents
 - RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
 - (electrode device with solid state reference system of sodium vanadium bronze)
- IT Polyamides, uses
- Polyesters, uses
- Polyoxyalkylenes, uses
- RL: DEV (Device component use); USES (Uses)
 - (electrode device with solid state reference system of sodium vanadium bronze)
- IT **Polymers**, reactions
 - RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 - (electrode device with solid state reference system of sodium vanadium bronze)
- IT Metals, uses
- Noble metals
- RL: DEV (Device component use); USES (Uses)
 - (for contact material; electrode device with solid state reference system of sodium vanadium bronze)
- IT Ion-selective electrodes
 - (hydrogen-selective; electrode device with solid state reference system of sodium vanadium bronze)
- IT Epoxides
- Polycarbonates, reactions
- Polyesters, reactions
- Polysiloxanes, reactions
- Polyurethanes, reactions
- RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 - (in binders; electrode device with solid state reference system of sodium vanadium bronze)
- IT Ionophores
 - (in **polymer membrane** for ion-selective material; electrode device with solid state reference system of sodium vanadium bronze)
- IT **Membranes**, nonbiological
 - (ionophore-containing **polymer**; electrode device with solid state reference system of sodium vanadium bronze)
- IT Ion-selective electrodes
 - (lead-selective; electrode device with solid state reference system of

- sodium vanadium bronze)
- IT Ion-selective electrodes
(lithium-selective electrodes; electrode device with solid state reference system of sodium vanadium bronze)
- IT Ion-selective electrodes
(magnesium-selective; electrode device with solid state reference system of sodium vanadium bronze)
- IT Ion-selective electrodes
(nickel-selective; electrode device with solid state reference system of sodium vanadium bronze)
- IT Electrodes
(planar; electrode device with solid state reference system of sodium vanadium bronze)
- IT Kaolin, uses
RL: DEV (Device component use); USES (Uses)
(silanized; electrode device with solid state reference system of sodium vanadium bronze)
- IT Ion-selective electrodes
(**silver**-selective; electrode device with solid state reference system of sodium vanadium bronze)
- IT Ion-selective electrodes
(sodium-selective; electrode device with solid state reference system of sodium vanadium bronze)
- IT Ceramics
(**supports**; electrode device with solid state reference system of sodium vanadium bronze)
- IT Printing (nonimpact)
(thick-film; electrode device with solid state reference system of sodium vanadium bronze)
- IT Ion-selective electrodes
(urea-selective, enzyme; electrode device with solid state reference system of sodium vanadium bronze)
- IT Enzyme electrodes
(urea-selective; electrode device with solid state reference system of sodium vanadium bronze)
- IT 57-13-6, Urea, analysis 7664-41-7, Ammonia, analysis 12408-02-5, Hydrogen ion, analysis 14127-61-8, Calcium ion, analysis 14280-50-3, Pb2+, analysis 14701-21-4, **Silver** ion, analysis 14701-22-5, analysis 14798-03-9, Ammonium ion, analysis 17341-24-1, analysis 17341-25-2, Sodium ion, analysis 18459-37-5, Cesium ion, analysis 22537-38-8, Rubidium ion, analysis 22537-39-9, Strontium ion, analysis 22537-48-0, Cadmium ion, analysis 22541-12-4, Barium ion, analysis 22541-53-3, analysis 24203-36-9, Potassium ion, analysis
RL: ANT (Analyte); ANST (Analytical study)
(electrode device with solid state reference system of sodium vanadium bronze)
- IT 124-38-9, Carbon dioxide, analysis
RL: ANT (Analyte); ARU (Analytical role, unclassified); ANST (Analytical study)
(electrode device with solid state reference system of sodium vanadium bronze)
- IT 9002-13-5, Urease
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
(electrode device with solid state reference system of sodium vanadium bronze)
- IT 7782-44-7, Oxygen, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(electrode device with solid state reference system of sodium vanadium

- bronze)
- IT 57-50-1, Sucrose, uses 112-15-2, Carbitol acetate 144-55-8, Sodium hydrogen carbonate, uses 1344-28-1, Aluminum oxide, uses 2487-90-3, Trimethoxysilane 7447-40-7, Potassium chloride, uses 7783-90-6, **Silver** chloride, uses 9003-39-8, Polyvinylpyrrolidone 9011-14-7, Polymethylmethacrylate 15802-18-3 25038-59-9, Polyethylene **terephthalate**, uses 25322-68-3, Polyethylene glycol 107253-34-9, Sodium vanadium oxide (NaO.33V2O5)
 RL: DEV (Device component use); USES (Uses)
 (electrode device with solid state reference system of sodium vanadium bronze)
- IT 7439-88-5, Iridium, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-16-6, Rhodium, uses 7440-57-5, Gold, uses
 RL: DEV (Device component use); USES (Uses)
 (for contact material; electrode device with solid state reference system of sodium vanadium bronze)
- IT 9002-81-7, Polyoxymethylene 9002-86-2, Polyvinyl chloride 9003-01-4, Polyacrylic acid 9003-18-3, Butadiene acrylonitrile **copolymer** 9003-53-6, Polystyrene 9004-34-6, Cellulose, reactions 9004-34-6D, Cellulose, derivs., reactions 9004-35-7, Cellulose acetate 9004-57-3, Ethyl cellulose 9005-18-9, Propyl cellulose 25087-26-7, Polymethacrylic acid
 RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (in binders; electrode device with solid state reference system of sodium vanadium bronze)
- IT 6833-84-7, Nonactin
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (in **preparation** of ammonium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)
- IT 117-81-7, **Diocetylphthalate** 14680-77-4, Potassium-tetra-p-chlorophenylborate 58801-34-6, ETH1001
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (in **preparation** of calcium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)
- IT 108-94-1, Cyclohexanone, uses 109-99-9, Tetrahydrofuran, uses
 RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
 (in **preparation** of calcium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)
- IT 3586-60-5, TDDA
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (in **preparation** of hydrogen ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)
- IT 103-23-1, Dioctyl adipate 2001-95-8, Valinomycin
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)
 (in **preparation** of potassium ion-selective **membrane**; electrode device with solid state reference system of sodium vanadium bronze)
- IT 97600-39-0
 RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)

(in **preparation** of sodium ion-selective **membrane**;
electrode device with solid state reference system of sodium vanadium
bronze)

IT 7631-86-9, Silica, uses
RL: DEV (Device component use); USES (Uses)
(pyrogenic; electrode device with solid state reference system of sodium
vanadium bronze)

IT 12597-70-5, Bronze
RL: DEV (Device component use); USES (Uses)
(sodium vanadium; electrode device with solid state reference system of
sodium vanadium bronze)

IT 109-99-9, Tetrahydrofuran, uses
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses)
(in **preparation** of calcium ion-selective **membrane**;
electrode device with solid state reference system of sodium vanadium
bronze)

RN 109-99-9 HCAPLUS
CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)



RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 22 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:252450 HCAPLUS
DN 135:55045
TI Studies of difurylmethane-maleic anhydride **copolymer** as an
ion-responsive **membrane** for the determination of mono-, di- and
tri-valent cations
AU Ngila, J. Catherine; Ddamba, Wilfred A. A.
CS Chemistry Department, University of Botswana, Gaborone, Botswana
SO Macromolecular Symposia (2001), 165 (Developments in Polymer Synthesis and
Characterization), 73-81
CODEN: MSYMEC; ISSN: 1022-1360
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB The synthesis of the difurylmethane-maleic anhydride (DFM-MAH)
copolymer was done by reacting difurylmethane with maleic acid
followed by hydrolysis with sodium hydroxide to produce the anhydride
sodium salt. Construction of a sensor with the **copolymer** as the
ion-exchanger material was done by mixing the **copolymer** with
poly(vinyl chloride), PVC, plastic matrix and di-Bu **phthalate**
(DBP) plasticizer in **THF solvent** to form a paste. The
paste was coated on a piece of **silver** wire to produce a coated
wire electrode (CWE). The response characteristics of the
copolymer-CWE, in potentiometric anal., were studied for mono-,
di- and tri-valent cations. All the cations studied showed a
near-Nernstian response for concns. ranging from 5×10^{-8} M to 1
 $\times 100$ M in triethanolamine buffer in aqueous media (0.5 M, pH 10.5). The
membrane had a composition of 20:20:60 for the **copolymer**, PVC
and DBP.
CC 79-2 (Inorganic Analytical Chemistry).
Section cross-reference(s): 38

ST difurylmethane maleic anhydride **copolymer** ion responsive
membrane detn cation

IT Ion-selective electrodes
(coated-wire; mono-, di- and tri-valent cations determination in solution by
potentiometric sensor based on difurylmethane-maleic anhydride
copolymer as ion responsive **membrane**)

IT Cations
Ion exchangers
Potentiometry
(mono-, di- and tri-valent cations determination in solution by
potentiometric
sensor based on difurylmethane-maleic anhydride **copolymer** as
ion responsive **membrane**)

IT Sensors
(potentiometric; mono-, di- and tri-valent cations determination in
solution by
potentiometric sensor based on difurylmethane-maleic anhydride
copolymer as ion responsive **membrane**)

IT 7429-90-5, Aluminum, analysis 7439-89-6, Iron, analysis 7439-92-1,
Lead, analysis 7439-93-2, Lithium, analysis 7440-09-7, Potassium,
analysis 7440-23-5, Sodium, analysis 7440-39-3, Barium, analysis
7440-46-2, Cesium, analysis 7440-70-2, Calcium, analysis 14798-03-9,
Ammonium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(mono-, di- and tri-valent cations determination in solution by
potentiometric
sensor based on difurylmethane-maleic anhydride **copolymer** as
ion responsive **membrane**)

IT 7440-22-4, **Silver**, analysis
RL: ANT (Analyte); ARU (Analytical role, unclassified); DEV (Device
component use); ANST (Analytical study); USES (Uses)
(mono-, di- and tri-valent cations determination in solution by
potentiometric
sensor based on difurylmethane-maleic anhydride **copolymer** as
ion responsive **membrane**)

IT 344958-15-2P
RL: ARG (Analytical reagent use); DEV (Device component use); PNU
(Preparation, unclassified); PRP (Properties); ANST (Analytical study);
PREP (Preparation); USES (Uses)
(mono-, di- and tri-valent cations determination in solution by
potentiometric
sensor based on difurylmethane-maleic anhydride **copolymer** as
ion responsive **membrane**)

IT **84-74-2**, Dibutyl **phthalate** 9002-86-2, Polyvinyl
chloride
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
(Analytical study); USES (Uses)
(mono-, di- and tri-valent cations determination in solution by
potentiometric
sensor based on difurylmethane-maleic anhydride **copolymer** as
ion responsive **membrane**)

IT 344958-14-1P
RL: ARU (Analytical role, unclassified); PNU (Preparation, unclassified);
RCT (Reactant); ANST (Analytical study); PREP (Preparation); RACT
(Reactant or reagent)
(mono-, di- and tri-valent cations determination in solution by
potentiometric
sensor based on difurylmethane-maleic anhydride **copolymer** as
ion responsive **membrane**)

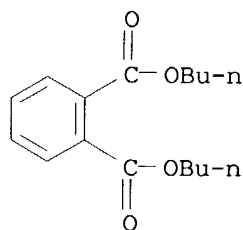
IT 84-74-2, Dibutyl phthalate

RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(mono-, di- and tri-valent cations determination in solution by potentiometric sensor based on difurylmethane-maleic anhydride copolymer as ion responsive membrane)

RN 84-74-2 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 23 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:50443 HCAPLUS

DN 134:105653

TI Sunscreens containing UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing the natural skin barrier

IN Muller, Rainer Helmut; Wissing, Sylvia; Mader, Karsten

PA Pharmasol G.m.b.H., Germany

SO PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001003652	A2	20010118	WO 2000-EP6534	20000710
WO 2001003652	A3	20010712		
WO 2001003652	C2	20020912		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 10016155	A1	20010118	DE 2000-10016155	20000331
BR 2000012445	A	20020402	BR 2000-12445	20000710
EP 1194111	A2	20020410	EP 2000-951366	20000710
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2003504318	T2	20030204	JP 2001-508936	20000710
ZA 2002000256	A	20020711	ZA 2002-256	20020111
PRAI DE 1999-19932156	A	19990713		

DE 2000-10016155 A 20000331
 WO 2000-EP6534 W 20000710

- AB The invention concerns sunscreens, i.e. UV radiation reflecting or absorbing agents, designed to be applied on the skin, the mucous **membranes**, the scalp and the hair for protection against harmful UV radiation and to reinforce the natural skin barrier. The inventive agents comprise polymorphous, crystalline or semicryst. solid **polymeric** or lipidic particles. Thus, a UV blocking lipid emulsion was produced by high-pressure homogenization of 10 weight/weight% cetyl palmitate and Tego Care 450.
- IC ICM A61K007-00
 CC 62-4 (Essential Oils and Cosmetics)
 ST sunscreen compn UV radiation skin
 IT Onium compounds
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (1-(carboxymethyl)-4,5-dihydro-1-(2-hydroxyethyl)-2-norcoco alkyl imidazolium, hydroxides, sodium salts; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT **Alcohols**, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (C16-18, reaction with sulfuric acid, sodium salts; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Glycerides, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (C8-10; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Beeswax
 Differential scanning calorimetry
 Disperse systems
 Hair
 Milling (size reduction)
 Mucous **membrane**
 Particle size
 Perfumes
 Repellents
 Scalp
 Skin
 Sunscreens
 Surfactants
 UV radiation
 (UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Bentonite, biological studies
 Carbon black, biological studies
 Carnauba wax
 Coconut oil
 Collagens, biological studies
 Cottonseed oil
 Elastins
 Essential oils
 Flavonoids
 Glycoproteins, general, biological studies

Jojoba oil
 Kaolin, biological studies
 Keratins
 Lecithins
 Linseed oil
 Lipids, biological studies
 Melanins
 Mucopolysaccharides, biological studies
 Olive oil
 Palm oil
 Peanut oil
 Polyamides, biological studies
 Polycarbonates, biological studies
 Polyesters, biological studies
Polymers, biological studies
 Polyurethanes, biological studies
 Safflower oil
 Tocopherols

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(UV radiation reflecting or absorbing agents, protecting against
 harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)

IT Fats and Glyceridic oils, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(animal; UV radiation reflecting or absorbing agents, protecting
 against harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)

IT Essential oils

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(anise; UV radiation reflecting or absorbing agents, protecting against
 harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)

IT Fats and Glyceridic oils, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(avocado; UV radiation reflecting or absorbing agents, protecting
 against harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)

IT Essential oils

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(bergamot; UV radiation reflecting or absorbing agents, protecting
 against harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)

IT Essential oils

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(cinnamon; UV radiation reflecting or absorbing agents, protecting
 against harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)

IT Essential oils

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(clove; UV radiation reflecting or absorbing agents, protecting against
 harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)

- IT Cosmetics
(creams; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT **Polymer** morphology
(crystalline; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(eucalyptus; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Fats and Glyceridic oils, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(fish; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Diglycerides
Glycerides, biological studies
Monoglycerides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(hydrogenated coco monoglycerides, diglycerides and triglycerides, Witopsol; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(jasmine; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(lavender; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(lemon; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Cosmetics
(lipsticks; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Cosmetics
(lotions; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(mandarin orange; UV radiation reflecting or absorbing agents,

- protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Proteins, general, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (milk; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (mint, Mentha; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (peppermint; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (rose; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (rosemary; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Essential oils
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (sandalwood; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Fats and Glyceridic oils, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (sesame; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Cosmetics
 (sprays; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Fats and Glyceridic oils, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (walnut; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as sunscreens)
- IT Fats and Glyceridic oils, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (wheat germ; UV radiation reflecting or absorbing agents, protecting against harmful UV radiation and reinforcing natural skin barrier as

- sunscreens)
- IT Essential oils
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (ylang-ylang; UV radiation reflecting or absorbing agents, protecting
 against harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)
- IT 36574-66-0D, N-coco acyl derivs.
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (Cocoamidopropylbetaine; UV radiation reflecting or absorbing agents,
 protecting against harmful UV radiation and reinforcing natural skin
 barrier as sunscreens)
- IT 50-81-7, Vitamin C, biological studies 50-99-7, D-Glucose, biological
 studies 51-17-2D, Benzimidazole, derivs. 52-90-4, L-Cysteine,
 biological studies 56-81-5, Glycerol, biological studies 56-86-0,
 L-Glutamic acid, biological studies 57-13-6, Urea, biological studies
 57-55-6, Propylene glycol, biological studies 57-88-5, Cholesterol,
 biological studies 58-85-5, Biotin 58-95-7, Vitamin E-Acetate
 60-33-3, Linolic acid, biological studies 68-26-8, Retinol 72-17-3,
 Sodiumlactate 79-81-2, Retinolpalmitate 80-56-8, α -Pinene
 81-13-0, Panthenol **84-74-2, Dibutylphthalate**
 89-78-1, Menthol 94-25-7, Butyl-p-Aminobenzoate 94-96-2 97-53-0,
 Eugenol 97-59-6, Allantoin 98-92-0, Niacinamide 110-27-0,
 Isopropylmyristate 118-56-9, Homosalate 118-60-5, 2-
 Ethylhexylsalicylate 119-61-9, Benzophenone, biological studies
 120-46-7, Dibenzoylmethane 121-79-9, Propylgallate 123-28-4,
 Dilaurylthiodipropionate 127-47-9, Retinol acetate 128-37-0,
 biological studies **131-11-3, Dimethylphthalate**
 131-54-4, 2,2'-Dihydroxy-4,4'-dimethoxybenzophenone 131-57-7,
 2-Hydroxy-4-methoxybenzophenone 136-44-7, Glycerol-p-Aminobenzoate
 138-86-3, Limonen 150-13-0, p-Aminobenzoic acid 331-39-5, Caffeic acid
 463-40-1, Linolenic acid 470-82-6, 1,8-Cineol 471-34-1,
 Calcium-carbonate, biological studies 515-69-5, Bisabolol 538-24-9,
 Glyceroltrilaurate 540-10-3, Cetylpalmitate 557-05-1, Zinc stearate
 1077-28-7, α -Liponic acid 1166-52-5, Dodecylgallate 1309-37-1,
 Iron-(III)oxide, biological studies 1309-48-4, Magnesiumoxide,
 biological studies 1314-13-2, Zinc oxide, biological studies
 1317-38-0, Copperoxide, biological studies 1323-38-2, Glyceryl
 ricinoleate 1406-18-4, Vitamin E 1406-18-4D, Vitamin E, conjugate with
 Polyethylene succinate 1843-05-6, 2-Hydroxy-4-octyloxybenzophenone
 2128-93-0, 4-Phenylbenzophenone 2451-01-6, Terpinhydrate 4065-45-6,
 Sulisobenzene 4810-56-4 5466-77-3, p-Methoxycinnamic
 acid-2-ethylhexylester 6805-41-0, Aescin 7440-22-4, **Silver**,
 biological studies 7631-86-9, Silica, biological studies 7664-93-9D,
 Sulfuric acid, mixed cetyl-stearyl esters, sodium salts, biological
 studies 7727-43-7, Bariumsulfate 7757-87-1 7778-18-9, Calciumsulfate
 7787-59-9, Bismuth oxychloride 8067-32-1, Glycerolpalmitostearate
 9000-69-5, Pectins 9002-89-5, Polyvinylalcohol 9003-01-4, Polyacrylic
 acid 9003-20-7, Polyvinylacetate 9003-39-8, Polyvinylpyrrolidone
 9003-53-6, Polystyrene 9004-61-9, Hyaluronic acid 9005-65-6, Tween 80
 11100-07-5, Ironoxide hydrate 13463-67-7, Titanium dioxide, biological
 studies 14807-96-6, Talcum, biological studies 15431-40-0,
 Magnesiumascorbate 18641-57-1, Glyceryltribehenate 25013-16-5
 25087-26-7, Polymethacrylic acid 25168-73-4, Saccharosetearate
 25339-99-5, Saccharoselaurate 25569-53-3D, Polyethylene succinate,
 conjugate with Vitamin E 25667-11-2D, Polyethylene succinate, conjugate
 with Vitamin E 26266-58-0, Span 85 26446-38-8, Saccharose
 monopalmitate 26545-51-7, N,N-Diethyltoluamide 26680-10-4, Polylactide

27195-16-0, Saccharosedistearate 27216-47-3, Saccharose monomyristate
 27503-81-7, 2-Phenylbenzimidazole-5-sulfonic acid 28874-51-3
 31566-31-1, Glycerolmonostearate 34562-29-3, α -Tocopherol-
 Palmitate 36148-84-2, Vitamin E-Linoleate 36861-47-9,
 3-(4-Methylbenzylidene)camphor 42922-74-7, α -D-Glucopyranoside,
 β -D-fructofuranosyl, monooctanoate 43119-47-7, Vitamin E-Nicotinate
 52352-27-9, Polyhydroxybutyric acid 57093-19-3, Pyroglutamyl-L-arginine
 58817-05-3, Octyldimethyl-p-Aminobenzoate 60842-32-2, Aerosil R972
 63250-25-9, 4-Isopropylidibenzoylmethane 64296-33-9, Vitamin C-Palmitate
 68141-12-8, Propyl p-Methoxycinnamate 70356-09-1, 4-tert-Butyl-4'-
 methoxydibenzoylmethane 71617-10-2, Isoamyl p-methoxycinnamate
 77466-09-2, Miglyol 840 88122-99-0, Octyltriazone 92761-26-7,
 Terephthalylidene-3,3'-dicamphor-10,10'-disulfonic acid 106392-12-5,
 Poloxamer 188 155633-54-8 157175-98-9, Tego Care 450 187339-62-4,
 Polyglycerolmethylglucosedistearate
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(UV radiation reflecting or absorbing agents, protecting against
 harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)

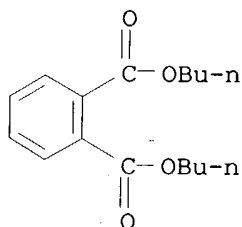
IT 84-74-2, Dibutylphthalate 131-11-3,
 Dimethylphthalate

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(UV radiation reflecting or absorbing agents, protecting against
 harmful UV radiation and reinforcing natural skin barrier as
 sunscreens)

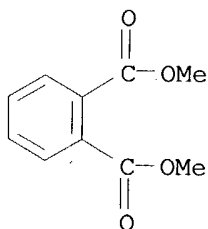
RN 84-74-2 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 131-11-3 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 24 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2000:900552 HCAPLUS
 DN 134:73508

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

TI Synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solutions

IN Bruening, Ronald L.; Krakowiak, Krzysztof E.; Dileo, Anthony J.; Parekh, Bipin S.

PA IBC Advanced Technologies, Inc., USA; Millipore Corp.

SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000076760	A1	20001221	WO 2000-US16110	20000609
	W: JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6221476	B1	20010424	US 1999-330543	19990611
	EP 1202857	A1	20020508	EP 2000-941367	20000609
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
	JP 2003502133	T2	20030121	JP 2001-503248	20000609
PRAI	US 1999-330543	A	19990611		
	WO 2000-US16110	W	20000609		
OS	MARPAT 134:73508				

AB Chelating agents for selective binding of metal ions from a solution are **membrane-bound** hydroxypyridinone-containing ligands that are bound to a **membrane** with a hydrophilic surface, with a general formula M-A-L-(HOPO)_n, in which M is the **membrane**, A is a covalent linkage, L is the ligand carrier, and HOPO is the hydroxypyridinone appropriately spaced on the ligand carrier to provide a min. of 6 functional coordination metal binding sites, and n = 3-6. The HOPO structures are derived from 3-hydroxy-2(1H)-pyridinone, 1-hydroxy-2(1H)-pyridinone, and 3-hydroxy-4(1H)-pyridinone. The covalent linkage selected from amide, ester, thioester, carbonyl, ether, thioether, sulfonate, and sulfonamide groups. Suitable **membranes** (M) can be hydrophilic (e.g., polyamides, cellulose, regenerated cellulose, cellulose acetate, nitrocellulose) or composite **membranes** (e.g., PTFE, PVDF, polyethylene, polypropylene, poly(methylpentene), polystyrene, polysulfones, polyethersulfones, polyethylene **terephthalate**, poly(butylene **terephthalate**), polyacrylates, polycarbonates, poly(vinyl chloride), and polyacrylonitrile). The chelating agents are active in removing metal ions from neutral to slightly acidic solns.

(especially

Cu²⁺, Al³⁺, Ga³⁺, Ni²⁺, Zn²⁺, Cd²⁺, **Ag⁺**, and Hg²⁺), in removing Pu⁴⁺, Th⁴⁺, Zr⁴⁺, and Hf⁴⁺ ions from aqueous HNO₃, and removing Fe(3+) from dilute (1-5%) HF and NH₄⁺ solns.

IC ICM B32B003-26
ICS B01D011-00; B01D063-00

CC 48-1 (Unit Operations and Processes)
Section cross-reference(s): 28, **38**, 61, 71

ST chelating agent **membrane supported** agent; metal chelation **membrane supported** reagent; transition metal chelation **membrane supported** reagent; actinide chelation **membrane supported** reagent; lanthanide chelation **membrane supported** reagent; hydroxypyridinone **membrane supported** ligand metal chelation

IT Actinides

Rare earth metals, processes

Transition metals, processes

RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)

(ions, chelation and removal of; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT Polysulfones, reactions

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(polyether-, reaction products, **membranes, polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT **Membranes**, nonbiological

(**polymeric**; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT Polyethers, reactions

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(polysulfone-, reaction products, **membranes, polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT **Fluoropolymers**, reactions

Polyesters, reactions

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(reaction products with hydroxypyridinone-containing reagents, **membranes, polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT Polyamides, reactions

Polycarbonates, reactions

Polysulfones, reactions

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(reaction products, **membranes, polymer**-bound chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT Chelating agents

Polymer-supported reagents

Sequestering agents

(synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

IT 14280-50-3, Lead ion(2+), processes 14302-87-5, processes 14701-21-4, **Silver** ion(1+), processes 14701-22-5, Nickel ion(2+), processes 15158-11-9, Copper ion(2+), processes 15543-40-5, Zirconium ion(4+), processes 16065-92-2, Thorium ion(4+), processes 20074-52-6, Ferric ion, processes 22537-23-1, processes 22537-33-3, Gallium ion(3+), processes 22537-48-0, processes 22541-25-9, Hafnium ion(4+), processes 22541-44-2, Plutonium ion(4+), processes 23713-49-7, Zinc ion(2+), processes

RL: RCT (Reactant); REM (Removal or disposal); PROC (Process); RACT (Reactant or reagent)

(chelation and removal of; synthesis and use of **polymeric**

membrane-supported hydroxypyridinone ligands for chelation of metals from aqueous solns.)

- IT 822-89-9, 1-Hydroxy-2(1H)-pyridinone 1121-23-9, 3-Hydroxy-4(1H)-pyridinone 16867-04-2, 3-Hydroxy-2(1H)-pyridinone 94781-89-2D, 2-Pyridinecarboxylic acid, 1,6-dihydro-1-hydroxy-6-oxo-, reaction products with coupling agents and **polymeric** hydrophilic **membrane** surfaces

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(**membrane-supported** ligands; synthesis and use of **polymeric membrane-supported**

hydroxypyridinone ligands for chelation of metals from aqueous solns.)

- IT 9002-84-0D, Polytetrafluoroethylene, reaction products with hydroxypyridinone-containing reagents 9002-86-2D, Polyvinyl chloride, reaction products with hydroxypyridinone-containing reagents 9002-88-4D, Polyethylene, reaction products with hydroxypyridinone-containing reagents 9003-01-4D, Poly(acrylic acid), reaction products with hydroxypyridinone-containing reagents 9003-07-0D, Polypropylene, reaction products with hydroxypyridinone-containing reagents 9003-53-6D, Polystyrene, reaction products with hydroxypyridinone-containing reagents 9003-70-7D, Divinylbenzene-styrene **copolymer**, reaction products with hydroxypyridinone-containing reagents 9004-34-6D, Cellulose, reaction products with hydroxypyridinone-containing reagents, reactions 9004-35-7D, Cellulose acetate, reaction products with hydroxypyridinone-containing reagents 9004-70-0D, Nitrocellulose, reaction products with hydroxypyridinone-containing reagents 24937-79-9D, Poly(vinylidene difluoride), reaction products with hydroxypyridinone-containing reagents 24968-12-5D, Polybutylene **terephthalate**, reaction products with hydroxypyridinone-containing reagents 25014-41-9D, Polyacrylonitrile, reaction products with hydroxypyridinone-containing reagents 25038-59-9D, Polyethylene **terephthalate**, reaction products with hydroxypyridinone-containing reagents 25068-26-2D, Poly(4-methyl-1-pentene), reaction products with hydroxypyridinone-containing reagents 26062-94-2D, Polybutylene **terephthalate**, reaction products with hydroxypyridinone-containing reagents

RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)

(**membranes**, **polymer-bound** chelating agents;

synthesis and use of **polymeric membrane-**

supported hydroxypyridinone ligands for chelation of metals from aqueous solns.)

- IT 74568-07-3, Pentacyclo[19.3.1.13,7.19,13.115,19]octacosal-1(25),3,5,7(28),9,11,13(27),15,17,19(26),21,23-dodecaene-25,26,27,28-tetrol

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction and cyanoalkylation of; in synthesis of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

- IT 314256-73-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis and cyanoalkylation of; in synthesis of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)

- IT 2465-91-0P, Propanenitrile, 3,3'-[[2,2-bis[(2-cyanoethoxy)methyl]-1,3-propanediyl]bis(oxy)]bis- 314256-74-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis and hydrogenation of; in synthesis of **polymeric**

- membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)
- IT 5045-94-3P, 1-Propanamine, 3,3'-[[2,2-bis[(3-aminopropoxy)methyl]-1,3-propanediyl]bis(oxy)]bis- 314256-75-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis and reaction of; in synthesis of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)
- IT 4742-00-1P, 1,3-Propanediamine, 2,2-bis(aminomethyl)-
 RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (synthesis of and N-hydroxyoxypyridinecarboxylic acid reaction with; in synthesis of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)
- IT 314254-85-8DP, reaction products with coupling agents and activated **polymers** 314254-86-9DP, reaction products with coupling agents and activated **polymers** 314254-87-0DP, reaction products with coupling agents and activated **polymers** 314254-88-1DP, reaction products with coupling agents and activated **polymers** 314256-76-3DP, reaction products with coupling agents and activated **polymers**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis of, **polymer-bound** chelating agents; synthesis and use of **polymeric membrane-supported** hydroxypyridinone ligands for chelation of metals from aqueous solns.)
- RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 25 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 2000:609047 HCAPLUS
 DN 133:180395
 TI Solid gel **membrane**
 IN Chen, Muguo; Tsai, Tsepin; Yao, Wayne; Chang, Yuen-ming; Li, Lin-feng; Tom, Karen
 PA Reveo, Inc., USA
 SO PCT Int. Appl., 44 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000051198	A2	20000831	WO 2000-US4881	20000225
WO 2000051198	A3	20010111		
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 2003099872	A1	20030529	US 1999-259068	19990226
US 6605391	B2	20030812		
US 6358651	B1	20020319	US 2000-482126	20000111
EP 1155467	A2	20011121	EP 2000-913617	20000225

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

BR 2000008506	A	20020205	BR 2000-8506	20000225
JP 2002538585	T2	20021112	JP 2000-601703	20000225
AU 772935	B2	20040513	AU 2000-35030	20000225

PRAI US 1999-259068 A 19990226
US 2000-482126 A 20000111
WO 2000-US4881 W 20000225

AB A highly conductive **polymer** based solid gel **membrane** is especially well-suited for use in such electrochem. devices as metal/air, Zn/MnO₂, Ni/Cd batteries and hydrogen fuel cells, as well as in electrochromic devices such as smart windows and flat panel displays. Furthermore, in rechargeable electrochem. cells, the solid gel **membrane** is highly-effective for use as a separator between the anode and charging electrode. In accordance with the principles of the invention, the highly conductive **membrane** comprises a **support** or **substrate** and a **polymeric** gel composition having an ionic species contained in a solution phase thereof. The **polymer**-based gel is prepared by adding an ionic species to a monomer solution followed by **polymerization**. After **polymerization**, the ionic species is embedded in the **polymer**-based gel where it remains. The ionic species behaves like a liquid electrolyte, while at the same time, the **polymer**-based solid gel **membrane** provides a smooth impenetrable surface that allows for the exchange of ions. An advantage of the novel **membrane** is that its measured ionic conductivity is much higher than previously observed in prior art solid electrolytes or electrolyte-**polymer** films.

IC ICM H01M006-22
ICS H01M012-06; H01B001-12; C08F251-02; C08F257-02; C08L051-02;
C08F251-00; C08F273-00; B01D069-10; G02F001-15

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 35, 38, 74

ST battery electrolyte gel **membrane**; fuel cell electrolyte gel **membrane**; electrochromic device electrolyte gel **membrane**; display device electrolyte gel **membrane**

IT Windows
Windows
(electrochromic; ionic conducting **polymer**-based solid gel **membrane**)

IT Optical imaging devices
(flat panel; ionic conducting **polymer**-based solid gel **membrane**)

IT Fuel cell separators
Fuel cells
Polymerization
Polymerization catalysts
Secondary batteries
Secondary battery separators
(ionic conducting **polymer**-based solid gel **membrane**)

IT Polyamides, uses
Polyolefins
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)

IT Polyesters, uses
Polysulfones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)

IT Alkali metal oxides

- RL: CAT (Catalyst use); USES (Uses)
(peroxides; ionic conducting **polymer**-based solid gel
membrane)
- IT Peroxysulfates
RL: CAT (Catalyst use); USES (Uses)
(peroxydisulfates, alkali metal; ionic conducting **polymer**
-based solid gel **membrane**)
- IT **Polymerization**
(**photopolymn.**; ionic conducting **polymer**-based solid
gel **membrane**)
- IT **Polymerization**
(radiochem.; ionic conducting **polymer**-based solid gel
membrane)
- IT Electrochromic devices
Electrochromic devices
(windows; ionic conducting **polymer**-based solid gel
membrane)
- IT 50926-11-9, Ito
RL: TEM (Technical or engineered material use); USES (Uses)
(glass; ionic conducting **polymer**-based solid gel
membrane)
- IT 7727-54-0, Ammonium persulfate
RL: CAT (Catalyst use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)
- IT 1313-13-9, Manganese dioxide, uses 1313-99-1, Nickel oxide, uses
7429-90-5, Aluminum, uses 7439-89-6, Iron, uses 7439-93-2, Lithium,
uses 7439-95-4, Magnesium, uses 7440-02-0, Nickel, uses 7440-05-3,
Palladium, uses 7440-06-4, Platinum, uses 7440-43-9, Cadmium, uses
7440-44-0, Carbon, uses 7440-66-6, Zinc, uses 11104-61-3, Cobalt oxide
12194-71-7, Perovskite 20667-12-3, **Silver** oxide 30280-72-9,
Acrylic acid-methylenebisacrylamide **copolymer** 84943-80-6,
Acrylic acid-methylenebisacrylamide-1-vinyl-2-pyrrolidinone
copolymer
RL: DEV (Device component use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)
- IT 1310-58-3, Potassium hydroxide, uses 1310-65-2, Lithium hydroxide
1310-73-2, Sodium hydroxide, uses 7601-90-3, Perchloric acid, uses
7647-01-0, Hydrochloric acid, uses 7647-14-5, Sodium chloride, uses
7664-38-2, Phosphoric acid, uses 7664-93-9, Sulfuric acid, uses
7778-80-5, Potassium sulfate, uses 9002-89-5, Polyvinyl **alcohol**
9004-34-6, Cellulose, uses 12125-02-9, Ammonium chloride, uses
RL: DEV (Device component use); TEM (Technical or engineered material
use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)
- IT 79-06-1, 2-Propenamide, reactions 79-10-7, Acrylic acid, reactions
79-41-4, reactions 88-12-0, 1-Vinyl-2-pyrrolidinone, reactions
110-17-8, Fumaric acid, reactions 110-26-9 541-47-9, 3,3-Dimethyl
acrylic acid 627-64-5, Fumaramide 2210-25-5, N-Isopropylacryl amide
2680-03-7 3039-83-6, Vinylsulfonic acid, sodium salt 10117-38-1,
Potassium sulfite
RL: RCT (Reactant); RACT (Reactant or reagent)
(ionic conducting **polymer**-based solid gel **membrane**)
- IT 9004-32-4, Carboxymethyl cellulose 9005-25-8, Corn starch, uses
25038-59-9, Polyethylene **terephthalate**, uses 25704-18-1,
Poly(sodium 4-styrenesulfonate) 97917-26-5, Acrylamide-Methacrylic
acid-methylenebis(acrylamide) **copolymer** 104983-61-1, Maleic
acid-styrenesulfonic acid **copolymer**, sodium salt
RL: TEM (Technical or engineered material use); USES (Uses)
(ionic conducting **polymer**-based solid gel **membrane**)

L37 ANSWER 26 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:577098 HCAPLUS
 DN 131:181945
 TI Process for producing an electrochemical biosensor
 IN Say, James; Tomasco, Michael F.; Heller, Adam; Gal, Yoram; Aria, Behrad;
 Heller, Ephraim; Plante, Phillip J.; Vreeke, Mark S.
 PA E. Heller & Co., USA
 SO PCT Int. Appl., 82 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9945375	A1	19990910	WO 1999-US3781	19990222
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9927797	A1	19990920	AU 1999-27797	19990222
	EP 1060388	A1	20001220	EP 1999-908338	19990222
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002506205	T2	20020226	JP 2000-534863	19990222
	US 2003188427	A1	20031009	US 2003-405765	20030331
PRAI	US 1998-34422	A	19980304		
	WO 1999-US3781	W	19990222		
	US 2000-598776	A1	20000616		
AB	A process for the manufacture of small sensors with reproducible surfaces, including electrochem. sensors. One process includes forming channels in the surface of a substrate and disposing a conductive material in the channels to form an electrode. The conductive material can also be formed on the substrate by other impact and non-impact methods. In a preferred embodiment, the method includes the steps of providing a continuous substrate web, and disposing a pattern of a conductive material on the continuous substrate web to form one or more working electrodes and/or counter electrodes.				
IC	ICM G01N027-327				
	ICS C12Q001-00; G01N033-543				
CC	9-1 (Biochemical Methods)				
ST	process electrochem biosensor				
IT	Inks				
	(Conductive; process for producing electrochem. biosensor)				
IT	Printing (nonimpact)				
	(Electrophotog.; process for producing electrochem. biosensor)				
IT	Printing (nonimpact)				
	(Ionog.; process for producing electrochem. biosensor)				
IT	Printing (nonimpact)				
	(Piezo jet; process for producing electrochem. biosensor)				
IT	Polymers , uses				
	RL: DEV (Device component use); USES (Uses)				
	(co-; process for producing electrochem. biosensor)				
IT	Electrodes				

- (counter; process for producing electrochem. biosensor)
- IT Biosensors
 - (electrochem.; process for producing electrochem. biosensor)
- IT Polyesters, uses
 - RL: DEV (Device component use); USES (Uses)
 - (glycol-modified; process for producing electrochem. biosensor)
- IT Adhesion, physical
 - Welding of metals
 - (laser; process for producing electrochem. biosensor)
- IT Printing (nonimpact)
 - (magnetog.; process for producing electrochem. biosensor)
- IT Adhesive bonding
 - Ceramics
 - Electrodes
 - Films
 - Ink-jet printing
 - Membranes**, nonbiological
 - Pastes
 - Printing (nonimpact)
 - Temperature sensors
 - Welding
 - (**process** for **producing** electrochem. biosensor)
- IT Epoxy resins, uses
 - Metals, uses
 - Plastics, uses
 - Polycarbonates, uses
 - Polyesters, uses
 - Polymers**, uses
 - RL: DEV (Device component use); USES (Uses)
 - (process for producing electrochem. biosensor)
- IT Glycols, uses
 - RL: NUU (Other use, unclassified); USES (Uses)
 - (process for producing electrochem. biosensor)
- IT Adhesion, physical
 - (**solvent**; process for producing electrochem. biosensor)
- IT Sound and Ultrasound
 - (welding; process for producing electrochem. biosensor)
- IT 7782-44-7, Oxygen, analysis
 - RL: ANT (Analyte); ANST (Analytical study)
 - (process for producing electrochem. biosensor)
- IT 1317-82-4, Sapphire 7440-21-3D, Silicon, etched, uses 7440-22-4, **Silver**, uses 7440-44-0, Carbon, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses 12597-69-2, Steel, uses 25038-59-9D, Polyethylene **terephthalate**, glycol-modified
 - RL: DEV (Device component use); USES (Uses)
 - (process for producing electrochem. biosensor)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 27 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:566291 HCAPLUS
DN 131:172705
TI Ion conductive matrixes and their use in electrochemical devices
IN Peled, Emanuel; Duvdevani, Tair; Melman, Avi
PA Ramot University Authority for Applied Research & Industrial Development, Israel
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 1

PATENT-NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9944245	A1	19990902	WO 1999-IL109	19990222
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
IL 123419	A1	20001206	IL 1998-123419	19980224
IL 126830	A1	20010520	IL 1998-126830	19981030
CA 2320696	AA	19990902	CA 1999-2320696	19990222
AU 9926369	A1	19990915	AU 1999-26369	19990222
EP 1066656	A1	20010110	EP 1999-906424	19990222
R: DE, ES, FR, GB, IT, NL, SE				
JP 2002505506	T2	20020219	JP 2000-533910	19990222
PRAI IL 1998-123419	A	19980224		
IL 1998-126830	A	19981030		
WO 1999-IL109	W	19990222		

AB The present invention provides an ion conducting matrix comprising: (i) 5 to 60% by volume of an inorg. powder having a good aqueous electrolyte absorption capacity, (ii) 5 to 50% by volume of a **polymeric** binder that is chemical compatible with an aqueous electrolyte, and (iii) 10 to 90% by volume of an aqueous electrolyte, wherein the inorg. powder comprises essentially sub-micron particles. The present invention further provides a **membrane** being a film made of the matrix of the invention and a composite electrode comprising 10 to 70% by volume of the matrix of the invention.

IC ICM H01M004-58

ICS H01M006-14; H01M006-18; H01M006-16; H01M004-86; H01M004-62; H01M004-34; H01M004-32; H01M004-50; H01M004-42; H01M006-00; C25B011-04; C25B013-00; C25B009-00; C08J005-20; B23P019-00

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 72, 76

ST battery ion conductive matrix; capacitor ion conductive matrix

IT Primary batteries

(Zn-air; ion conductive matrixes and their use in electrochem. devices)

IT Carboxylic acids, uses

RL: MOA (Modifier or additive use); USES (Uses)

(aliphatic, esters, lubricants; ion conductive matrixes and their use in electrochem. devices)

IT Carboxylic acids, uses

RL: MOA (Modifier or additive use); USES (Uses)

(aromatic, esters, lubricants; ion conductive matrixes and their use in electrochem. devices)

IT **Fluoropolymers**, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(binder; ion conductive matrixes and their use in electrochem. devices)

IT Carboxylic acids, uses

RL: MOA (Modifier or additive use); USES (Uses)

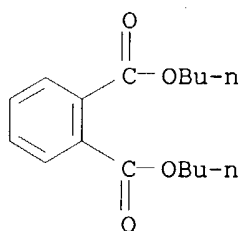
(dicarboxylic, aliphatic, esters, lubricants; ion conductive matrixes and their use in electrochem. devices)

IT Carboxylic acids, uses

RL: MOA (Modifier or additive use); USES (Uses)

- (dicarboxylic, aryl, esters, lubricants; ion conductive matrixes and their use in electrochem. devices)
- IT Capacitors
 - (double layer; ion conductive matrixes and their use in electrochem. devices)
- IT Hydrocarbons, uses
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (fluoro, lubricants; ion conductive matrixes and their use in electrochem. devices)
- IT Fuel cells
 - Membranes**, nonbiological
 - (ion conductive matrixes and their use in electrochem. devices)
- IT Metalloporphyrins
 - Oxides (inorganic), uses
 - RL: CAT (Catalyst use); USES (Uses)
 - (ion conductive matrixes and their use in electrochem. devices)
- IT Lubricants
 - (liquid; ion conductive matrixes and their use in electrochem. devices)
- IT Hydrocarbons, uses
 - Polysiloxanes, uses
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (lubricants; ion conductive matrixes and their use in electrochem. devices)
- IT Polysulfones, uses
 - Polysulfones, uses
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (polyamide-, binder; ion conductive matrixes and their use in electrochem. devices)
- IT Binders
 - (**polymer**; ion conductive matrixes and their use in electrochem. devices)
- IT Polyamides, uses
 - Polyamides, uses
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (polysulfone-, binder; ion conductive matrixes and their use in electrochem. devices)
- IT Electrolytic cells
 - (water; ion conductive matrixes and their use in electrochem. devices)
- IT 7429-90-5, Aluminum, uses 7440-43-9, Cadmium, uses 7440-66-6, Zinc, uses
 - RL: DEV (Device component use); USES (Uses)
 - (anodes; ion conductive matrixes and their use in electrochem. devices)
- IT 9002-84-0 9002-86-2, Pvc 9003-05-8, Polyacrylamide 9011-14-7, Pmma 9011-17-0, Polyvinylidene fluoride hexafluoropropylene 24937-79-9 24981-14-4, Polyvinyl fluoride 25014-41-9, Polyacrylonitrile
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (binder; ion conductive matrixes and their use in electrochem. devices)
- IT 1313-13-9, Manganese dioxide, uses 20667-12-3, **Silver** oxide 55070-72-9, Nickel hydroxide oxide
 - RL: DEV (Device component use); USES (Uses)
 - (cathodes; ion conductive matrixes and their use in electrochem. devices)
- IT 1314-35-8, Tungsten oxide, uses 12036-10-1, Ruthenium dioxide
 - RL: DEV (Device component use); USES (Uses)
 - (electrode; ion conductive matrixes and their use in electrochem. devices)
- IT 7440-44-0, Carbon, uses 7782-42-5, Graphite, uses
 - RL: DEV (Device component use); USES (Uses)
 - (electrodes; ion conductive matrixes and their use in electrochem. devices)

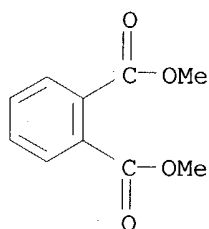
- devices)
- IT 7439-96-5, Manganese, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-22-4, **Silver**, uses 7440-33-7, Tungsten, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses
RL: CAT (Catalyst use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
- IT 354-88-1, Ethanesulfonic acid, pentafluoro- 375-73-5, Nonafluorobutanesulfonic acid 423-41-6 1493-13-6 2706-91-4, 1-Pentanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro- 14970-71-9, Dithionic acid 40856-11-9 41062-44-6 56344-03-7 82727-18-2
RL: DEV (Device component use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
- IT 1303-86-2, Boron oxide B_2O_3 , uses 1314-23-4, Zirconia, uses 1344-28-1, Aluminum oxide (Al_2O_3), uses 7631-86-9, Silica, uses 13463-67-7, Titania, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
- IT 10043-35-3, Boric acid (H_3BO_3), uses 12651-23-9, Titanium hydroxide 12713-25-6, Zirconium hydroxide oxide 12738-89-5, Titanium hydroxide oxide 14475-63-9, Zirconium hydroxide 21645-51-2, Aluminum hydroxide, uses 24623-77-6, Aluminum hydroxide oxide
RL: MOA (Modifier or additive use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
- IT 67-64-1, 2-Propanone, uses 68-12-2, uses 78-93-3, Ethyl methyl ketone, uses 84-66-2, Diethyl **phthalate** 84-74-2, Dibutyl **phthalate** 96-48-0 96-49-1, Ethylene carbonate 102-76-1, Glycerol triacetate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 108-94-1, Cyclohexanone, uses 109-99-9, uses 110-12-3, Isoamyl methyl ketone 110-71-4 120-92-3, Cyclopentanone 127-19-5, Dimethyl acetamide 131-11-3, Dimethyl **phthalate** 616-38-6, Dimethyl carbonate 872-50-4, n-Methylpyrrolidone, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
- IT 124-18-5, Decane 238407-65-3, Yivac 06/6
RL: MOA (Modifier or additive use); USES (Uses)
(lubricant; ion conductive matrixes and their use in electrochem. devices)
- IT 7664-38-2D, Phosphoric acid, ester, uses
RL: MOA (Modifier or additive use); USES (Uses)
(lubricants; ion conductive matrixes and their use in electrochem. devices)
- IT 84-74-2, Dibutyl **phthalate** 109-99-9, uses 131-11-3, Dimethyl **phthalate**
RL: TEM (Technical or engineered material use); USES (Uses)
(ion conductive matrixes and their use in electrochem. devices)
- RN 84-74-2 HCAPLUS
- CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 109-99-9 HCAPLUS
CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 131-11-3 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 28 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:141223 HCAPLUS
DN 130:163207
TI Use of locally delivered metal ions for treatment of periodontal disease
IN Roberts, F. Donald; Friden, Phillip M.; Spacciapoli, Peter; Nelson, Eric
PA Periodontix, Inc., USA
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9908691	A2	19990225	WO 1998-US16738	19980813
	WO 9908691	A3	19990506		
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,				

CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6153210	A	20001128	US 1997-911413	19970814
CA 2301065	AA	19990225	CA 1998-2301065	19980813
AU 9890178	A1	19990308	AU 1998-90178	19980813
EP 1011693	A1	20000628	EP 1998-942041	19980813

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

JP 2001515042	T2	20010918	JP 2000-509430	19980813
NO 2000000688	A	20000315	NO 2000-688	20000211

PRAI US 1997-911413 A 19970814

WO 1998-US16738 W 19980813

AB Periodontal disease can be treated by the administration of metal ions, preferably silver ions, to the site where the microorganisms that cause this disease reside. Administration can be to periodontal pockets or adjacent to exposed tooth roots or alveolar bone during periodontal surgical procedures. The metal ions can be administered in polymeric microparticles, deformable films or microparticles embedded within deformable films. The metal ions are particularly microbiocidal to the bacterial pathogens that are the causative agents of periodontal disease.

IC ICM A61K033-38

ICS A61K009-70

CC 1-12 (Pharmacology)

Section cross-reference(s): 63

ST metal ion antimicrobial periodontal disease; silver ion antimicrobial periodontal disease; bactericide periodontal disease metal ion; microparticle film metal ion periodontal disease

IT Polyurethanes, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (acrylates; metal ions, locally delivered, for treatment of periodontal disease)

IT Jaw

(alveolar bone; metal ions, locally delivered, for treatment of periodontal disease)

IT Proteins, specific or class

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study; unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(complexes, with silver; metal ions, locally delivered, for treatment of periodontal disease)

IT Periodontium

(disease; metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems

(films; metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems

(gels; metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems

(ligs.; metal ions, locally delivered, for treatment of periodontal disease)

IT Actinomyces viscosus

Antibacterial agents

Antimicrobial agents

Bacteroides forsythus

Campylobacter gracilis

Campylobacter rectus

Drug delivery systems

Eikenella corrodens

Fusobacterium nucleatum vincentii
Granulicatella adiacens
Haemophilus actinomycetemcomitans
Peptostreptococcus micros
Porphyromonas gingivalis
Prevotella intermedia
Prevotella nigrescens
Ralstonia pickettii
Streptococcus intermedius
Streptococcus mutans
Streptococcus sobrinus
Treponema denticola
(metal ions, locally delivered, for treatment of periodontal disease)
IT Metals, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)
IT Collagens, biological studies
Gelatins, biological studies
Polyamides, biological studies
Polyanhydrides
Polycarbonates, biological studies
Polyesters, biological studies
Polymers, biological studies
Polyolefins
Polyoxyalkylenes, biological studies
Polysulfones, biological studies
Polyurethanes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)
IT Drug delivery systems
(microparticles; metal ions, locally delivered, for treatment of periodontal disease)
IT Polyethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ortho ester group-containing; metal ions, locally delivered, for treatment of periodontal disease)
IT Surgery
(periodontal; metal ions, locally delivered, for treatment of periodontal disease)
IT Periodontium
(periodontitis; metal ions, locally delivered, for treatment of periodontal disease)
IT Periodontium
(pocket; metal ions, locally delivered, for treatment of periodontal disease)
IT Polyamides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(poly(amino acids); metal ions, locally delivered, for treatment of periodontal disease)
IT Polyurethanes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyether-; metal ions, locally delivered, for treatment of periodontal disease)
IT Tooth
(root; metal ions, locally delivered, for treatment of periodontal disease)
IT Drug delivery systems

(slow-release; metal ions, locally delivered, for treatment of periodontal disease)

IT Drug delivery systems
(solids; metal ions, locally delivered, for treatment of periodontal disease)

IT Ethers, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(vinyl, alkyl vinyl, polymers; metal ions, locally delivered, for treatment of periodontal disease)

IT 563-63-3, Silver acetate 7439-89-6, Iron, biological studies
7440-02-0, Nickel, biological studies 7440-22-4, Silver, biological studies
7440-22-4D, Silver, protein complexes, biological studies
7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies
7447-39-4, Copper (II) chloride, biological studies 7761-88-8, Silver nitrate, biological studies
7775-41-9, Silver fluoride 7783-89-3, Silver bromate 7783-91-7, Silver chlorite 7783-92-8, Silver chlorate **7783-93-9**, Silver perchlorate 7783-98-4, Silver permanganate 7783-99-5, Silver nitrite 10294-26-5, Silver sulfate 15768-18-0, Silver lactate 22199-08-2, Silver sulfadiazine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)

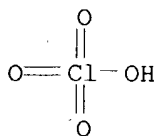
IT 57-55-6, Propylene glycol, biological studies 108-05-4D, Vinyl acetate, alkylene-vinyl acetate copolymers 9002-86-2, Polyvinyl chloride **9003-01-4**, Polyacrylic acid **9003-01-4D**, Polyacrylic acid, crosslinked 9003-11-6, Ethylene oxide-propylene oxide copolymer **9003-20-7**, Polyvinyl acetate 9003-42-3, Polyethylmethacrylate 9003-53-6, Polystyrene 9003-54-7, Styrene-acrylonitrile copolymer 9004-35-7, Cellulose acetate 9004-57-3, Ethyl cellulose 9004-62-0, Hydroxyethyl cellulose 9004-64-2, Hydroxypropyl cellulose 9004-65-3, Hydroxypropylmethyl cellulose 9005-32-7, Alginic acid 24981-14-4, Polyvinyl fluoride 25038-59-9, Poly(ethylene **terephthalate**), biological studies 25190-06-1, Polytetramethylene glycol 25232-42-2, Poly(vinyl imidazole) 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 26023-30-3, Poly[oxy(1-methyl-2-oxo-1,2-ethanediyl)] 26355-01-1, Hydroxyethyl methacrylate-methyl methacrylate copolymer 26680-10-4, Polylactide 26780-50-7, Lactide-glycolide copolymer 34346-01-5, Lactic acid-glycolic acid copolymer 106392-12-5, Pluronic 126040-58-2, Calcium polycarbophil
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)

IT 7440-21-3, Silicon, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(silicon/ethylcellulose/polyethylene glycol; metal ions, locally delivered, for treatment of periodontal disease)

IT **7783-93-9**, Silver perchlorate
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ions, locally delivered, for treatment of periodontal disease)

RN 7783-93-9 HCAPLUS

CN Perchloric acid, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)

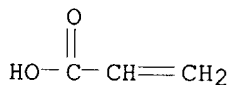


● Ag(I)

IT 9003-01-4, Polyacrylic acid 9003-01-4D, Polyacrylic acid, crosslinked 9003-20-7, Polyvinyl acetate
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (metal ions, locally delivered, for treatment of periodontal disease)
 RN 9003-01-4 HCAPLUS
 CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

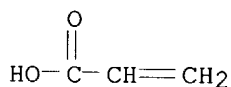
CRN 79-10-7
 CMF C3 H4 O2



RN 9003-01-4 HCAPLUS
 CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

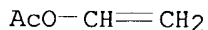
CRN 79-10-7
 CMF C3 H4 O2



RN 9003-20-7 HCAPLUS
 CN Acetic acid ethenyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 108-05-4
 CMF C4 H6 O2



L37 ANSWER 29 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1997:762114 HCAPLUS

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

DN 128:69474
 TI Electrically conductive paste containing network-structured **silver** powder
 IN Aoki, Takao; Tajika, Hiroshi; Sasahara, Kazuhiro
 PA Toyobo Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09306240	A2	19971128	JP 1996-150105	19960520
PRAI	JP 1996-150105		19960520		

AB The paste comprise 1-20 μ m 3-dimensional network-structured elec. conductive **Ag** secondary grain powders (A) from 0.1-5- μ m primary grains, a binder (B) with number-average mol. weight \geq 3000, a reactive curing agent (C), and a **solvent** with the weight ratio of A/(B + C) (60/40)-(95/5) and B/C (100/0)-(50/50), on which a metal plating is not applied after curing. The paste shows improved fine-pattern printability, low elec. resistance, and good bending resistance to be useful for **membrane**-type elec. circuits.

IC ICM H01B001-22
 ICS H05K001-09

CC 76-2 (Electric Phenomena)
 Section cross-reference(s): 38

ST elec conductor paste **silver** powder network; **membrane** elec circuit conductor paste

IT Films
 Films
 (elec. circuits; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

IT Crosslinking agents
 Electrically conductive pastes
 (elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

IT Polyesters, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

IT Electric circuits
 Electric circuits
 (film; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

IT Polyurethanes, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester-; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

IT 173859-25-1, UR 1400
 RL: TEM (Technical or engineered material use); USES (Uses)
 (UR 1400, binder; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

IT 54190-40-8P 63929-60-2P, Dimethyl **isophthalate**-dimethyl **terephthalate**-ethylene glycol-neopentyl glycol-sebacic acid **copolymer**
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

- (binder; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)
- IT 9003-22-9, VYHH 25086-48-0, VAGH
RL: TEM (Technical or engineered material use); USES (Uses)
(binder; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)
- IT 200292-58-6P, Hexamethylene diisocyanate isocyanurate-vinyl acetate-vinyl **alcohol**-vinyl chloride **copolymer** 200292-59-7P,
Dimethyl **isophthalate**-dimethyl **terephthalate**-ethylene glycol-hexamethylene diisocyanate isocyanurate-neopentyl glycol-sebacic acid-vinyl acetate-vinyl **alcohol**-vinyl chloride **copolymer** 200292-60-0P, 1,2-Ethanediol-1,3-benzenedicarboxylic acid-2,2-dimethyl-1,3-propanediol-4,4'-MDI-hexamethylene diisocyanate biuret **copolymer** 200292-61-1P, Dimethyl **isophthalate**-dimethyl **terephthalate**-ethylene glycol-neopentyl glycol-sebacic acid-hexamethylene diisocyanate biuret **copolymer** 200292-62-2P,
Dimethyl **isophthalate**-dimethyl **terephthalate**-ethylene glycol-neopentyl glycol-hexamethylene diisocyanate biuret **copolymer**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(crosslinked; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)
- IT 96-29-7D, Methyl ethyl ketoxime, reaction products with hexamethylene diisocyanate isocyanurate and hexamethylene diisocyanate biuret trimer 3779-63-3D, Hexamethylene diisocyanate isocyanurate, reaction products with Me Et ketoxime 172923-52-3D, reaction products with Me Et ketoxime
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(crosslinking agent; elec. conductive paste containing network-structured **silver** powder for **membrane**-type elec. circuit)

L37 ANSWER 30 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1996:222455 HCAPLUS

DN 124:248256

TI **Membrane** circuit boards with notched connectors

IN Suga, Kenji

PA Mitsumi Electric Co, Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08032193	A2	19960202	JP 1994-184028	19940713
PRAI	JP 1994-184028		19940713		

AB The title circuit boards comprise a polyethylene **terephthalate** **substrate** having a notched connector on its side-end, **Ag** paste-printed circuit layer provided on the surface of the **substrate** and the notches, and an insulator layer covering the circuit except the connector portion. The arrangement gives the circuit boards a decreased contact resistance and an increased connection strength.

IC ICM H05K001-11

ICA H05K001-02

CC 76-14 (Electric Phenomena)

Section cross-reference(s): 38, 56

ST **membrane** circuit board **silver** notched connector

IT **Membranes**

(circuit boards; **membrane** circuit boards with notched connectors)

IT Electric conductors

(**silver** paste; **membrane** circuit boards with notched connectors)

IT Electric contacts

(**silver**; **membrane** circuit boards with notched connectors)

IT Electric circuits

(printed, boards, **membrane** circuit boards with notched connectors)

IT 7440-22-4, **Silver**, properties

RL: DEV (Device component use); PRP (Properties); USES (Uses)
(**membrane** circuit boards with notched connectors)

IT 25038-59-9, Poly(ethylene **terephthalate**), uses

RL: DEV (Device component use); **POF (Polymer in formulation)**;
USES (Uses)

(**membrane**, circuit **substrate**; **membrane** circuit boards with notched connectors)

L37 ANSWER 31 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:449171 HCAPLUS

DN 121:49171

TI PVC **membrane** electrodes for manual and flow-injection determination of tetraphenylborate: applications to separate and sequential titrations of some metal ions

AU Hassan, Saad S. M.; Badr, Ibrahim H. A.

CS Fac. Sci., Ain Shams Univ., Cairo, Egypt

SO Talanta (1994), 41(4), 523-30

CODEN: TLNTA2; ISSN: 0039-9140

DT Journal

LA English

AB Three novel poly(vinyl chloride) matrix **membrane** electrodes, highly sensitive and selective for tetraphenylborate anion (TPB), are developed and electrochem. evaluated. They are based on the use of iron(II) bathophenanthroline, nickel(II) bathophenanthroline, and nitron ion-pair complexes with TPB as electroactive materials and dioctyl **phthalate** (DO) and 2-nitrophenyl Ph ether (NPPE) as plasticizing **solvent** mediators. The electrodes exhibit stable and rapid near-Nernstian response for 10⁻²-10⁻⁶ M TPB over the pH range 4-10. Use of these electrodes for direct potentiometric determination and potentiometric titration of ≥1 μg of TPB/mL and 0.6 mg of TPB/mL give results with average recoveries of 99.3% (mean standard deviation 0.5%) and 99.4% (mean standard deviation 0.2%), resp. Incorporation of the nitron-TPB PVC sensor in a flow-through sandwich cell provides an efficient flow-injection detector for determining TPB with an input rate of at least 60 samples/h. The limit of detection is 1.6 μg TPB/mL in a 20-μL sample. The electrodes are also used to monitor sep. and sequential titrns. of some metal ions (**Ag**, Tl, K) and NH₄⁺ with TPB. Alkaline earth (Ba, Ca, Sr) and transition metal (Cd, Pb [sic], Pd, Ni, Zn) ions upon reaction with polyethylene glycol and ethylenediamine, resp., form cationic complexes readily titrated with TPB. Optimum conditions are outlined for sequential titrns. of various combinations of metallic species.

CC 79-2 (Inorganic Analytical Chemistry)
Section cross-reference(s): **38**, 72, 80

ST tetraphenylborate selective electrode use metal detn; metal detn
potentiometric titrn; flow injection potentiometry tetraphenylborate detn

- IT Alkaline earth metals
Transition metals, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, by potentiometric titration with tetraphenylborate)
- IT Titration
(potentiometric, of metal ions with tetraphenylborate)
- IT Electrodes
(tetraphenylborate-selective, based on iron bathophenanthroline and nickel bathophenanthroline and nitron ion-pair complexes with tetraphenylborate)
- IT 117-81-7, Dioctyl **phthalate** 2216-12-8, 2-Nitrophenyl phenyl ether
RL: ANST (Analytical study)
(as plasticizing **solvent** mediator in tetraphenylborate selective electrodes)
- IT 4358-26-3, Tetraphenylborate
RL: ANT (Analyte); ANST (Analytical study)
(determination and use of, in potentiometric titration of metals, ion selective electrodes for)
- IT 7439-92-1, Lead, analysis 7440-02-0, Nickel, analysis 7440-05-3, Palladium, analysis 7440-09-7, Potassium, analysis 7440-22-4, **Silver**, analysis 7440-24-6, Strontium, analysis 7440-28-0, Thallium, analysis 7440-39-3, Barium, analysis 7440-43-9, Cadmium, analysis 7440-66-6, Zinc, analysis 7440-70-2, Calcium, analysis 14798-03-9, Ammonium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, by potentiometric titration with tetraphenylborate)
- IT 25322-68-3, Polyethylene glycol
RL: ANST (Analytical study)
(in determination of alkaline earth metals by subsequent potentiometric titration)
- IT 107-15-3, Ethylenediamine, uses
RL: USES (Uses)
(in determination of transition metals by subsequent potentiometric titration)
- IT 156057-34-0 156189-90-1 156189-91-2
RL: ANST (Analytical study)
(in tetraphenylborate selective electrodes)
- IT 9002-86-2, Poly(vinyl chloride)
RL: ANST (Analytical study)
(**membranes**, in tetraphenylborate selective electrodes)

L37 ANSWER 32 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1993:595652 HCAPLUS
DN 119:195652
TI Heparin-selective **polymeric membrane** electrode
IN Ma, Shu Ching; Meyerhoff, Mark E.; Yang, Victor C.
PA University of Michigan, USA
SO U.S., 10 pp.
CODEN: USXXAM

DT Patent
LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5236570	A	19930817	US 1992-849218	19920310
	WO 9318396	A1	19930916	WO 1993-US2149	19930310
	W: CA, JP				

RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
 EP 630472 A1 19941228 EP 1993-907373 19930310
 EP 630472 B1 20010502
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
 JP 07507137 T2 19950803 JP 1993-515976 19930310
 JP 3390439 B2 20030324
 AT 200930 E 20010515 AT 1993-907373 19930310
 US 5453171 A 19950926 US 1993-107321 19930816
 US 5607567 A 19970304 US 1995-477605 19950607
 PRAI US 1992-849218 A 19920310
 WO 1993-US2149 W 19930310
 US 1993-107321 A2 19930816

- AB An electrochem. sensor for determination of heparin in blood contains an anion exchange **membrane** consisting of a **polymer** matrix, an anion exchanger (quaternary ammonium, phosphonium, or arsonium salt), and a plasticizer. Thus, a solution of tridodecylmethylammonium chloride 3-4, PVC 132, and dioctyl sebacate (plasticizer) 66 mg in .apprx.1.5 mL **THF** was cast on a glass slide and dried to a film .apprx.200 μ m thick. This film was mounted on an electrode body containing a **Ag** /AgCl electrode and a 0.015M NaCl reference solution, and the potentiometric response to heparin in a sample solution was measured against a **Ag** /AgCl double junction reference electrode. The response was linear over the range 0.2-1.0 U heparin/mL in the presence of 0.12M Cl⁻.
- IC ICM G01N027-26
 NCL 204418000
 CC 1-1 (Pharmacology)
 Section cross-reference(s): 9
 ST heparin selective electrode **membrane**
 IT Blood analysis
 (heparin determination in, heparin-selective **membrane** electrode for)
 IT Plasticizers
 Phosphonium compounds
Polymers, uses
 Quaternary ammonium compounds, uses
 Urethane **polymers**, uses
 RL: BIOL (Biological study)
 (in heparin-selective electrode **membrane**)
 IT Onium compounds
 RL: BIOL (Biological study)
 (arsonium, in heparin-selective electrode **membrane**)
 IT Electrodes
 (**membrane**, heparin-selective, anion exchanger and plasticizer in **polymeric**)
 IT Anion exchangers
 (**membranes**, in heparin-selective electrode)
 IT Vinyl compounds, **polymers**
 RL: BIOL (Biological study)
 (**polymers**, in heparin-selective electrode **membrane**)
 IT Fatty acids, compounds
 RL: BIOL (Biological study)
 (tall-oil, epoxidized, esters, with ethylhexanoic acid, in heparin-selective electrode **membrane**)
 IT 9005-49-6, Heparin, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, heparin-selective **membrane** electrode for)
 IT 57-09-0, Hexadecyltrimethylammonium bromide 64-20-0, Tetramethylammonium bromide 77-94-1, Tri-n-butyl citrate **84-74-2**, Dibutyl **phthalate** 84-78-6, Butyl octyl **phthalate** 109-31-9, Di-n-hexyl azelate 109-43-3, Dibutyl sebacate 112-62-9, Methyl oleate

117-84-0, Dioctyl **phthalate** 122-62-3, Dioctyl sebacate
 123-79-5 142-16-5 142-91-6, Isopropyl palmitate 311-28-4,
 Tetrabutylammonium iodide 528-44-9D, 1,2,4-Benzenetricarboxylic acid,
 C8-10-alkyl esters 866-97-7, Tetrapentylammonium bromide 1010-19-1,
 Triethylphenylammonium iodide 2567-83-1, Tetraethylammonium perchlorate
 3426-74-2, Trimethylphenylammonium 3700-67-2,
 Dimethyldioctadecylammonium bromide 5137-55-3, Trioctylmethylammonium
 chloride 7173-54-8, Tridodecylmethylammonium chloride 9002-86-2,
 Poly(vinyl chloride) 9012-09-3, Cellulose triacetate 25822-51-9, Vinyl
alcohol/vinyl chloride **copolymer** 27138-31-4,
 Dipropylene glycol dibenzoate 27554-26-3, Diisooctyl **phthalate**
 28728-55-4, Polybrene 37682-29-4, o-Nitrophenyl octyl ether 56803-37-3
 68171-33-5, Isopropyl isostearate 150729-91-2

RL: ANST (Analytical study)

(in heparin-selective electrode **membrane**)

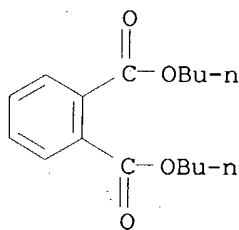
IT 84-74-2, Dibutyl **phthalate** 117-84-0, Dioctyl
phthalate

RL: ANST (Analytical study)

(in heparin-selective electrode **membrane**)

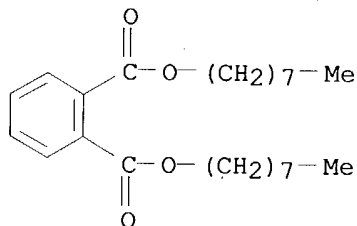
RN 84-74-2 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 117-84-0 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, dioctyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 33 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:433744 HCAPLUS

DN 117:33744

TI two layer wound-covering materials

IN Koide, Mikio; Konishi, Jun; Ikegami, Kazuhito; Osaki, Kenichi

PA Terumo K. K., Japan

SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 475807	A2	19920318	EP 1991-402266	19910819
	EP 475807	A3	19930210		
	EP 475807	B1	19980114		
	R: BE, DE, FR, GB, IT, NL, SE				
	JP 04108454	A2	19920409	JP 1990-226663	19900830
	JP 04129561	A2	19920430	JP 1990-247301	19900919
	JP 2896216	B2	19990531		
	AU 9182530	A1	19920312	AU 1991-82530	19910816
	AU 643058	B2	19931104		
PRAI	JP 1990-226663		19900830		
	JP 1990-247301		19900919		
AB	A two layer wound-covering material comprises a supporting layer to be contacted with the wound area and a layer of moisture permeation-controlling layer, and optionally either or both of layers containing an antimicrobial agent. The supporting layer is made of a film of a biocompatible highly aqueous gel-forming substance and at least a part of an area to be contacted with wound is coated with a water repellent substance. A nonwoven cloth made of Na CM-cellulose was immersed in a solution of Silastic silicone adhesive and dried before being immersed in CaCl ₂ solution and dried again. The cloth thus obtained was mounted on a teflon plate which had been applied with Silastic silicone adhesive to prepare a membrane which was cured at 60° to give the wound covering material of the invention. Rabbit wounds were covered with above wound-covering material for 2 wks., then rabbits were sacrificed. The wound-covering accelerated regeneration of the epidermis and prevented hypertrophy.				
IC	ICM A61L015-52				
	ICS A61L015-60				
CC	63-7 (Pharmaceuticals)				
	Section cross-reference(s): 1, 38				
ST	wound dressing gel film; CM cellulose teflon wound dressing				
IT	Rubber, silicone, biological studies				
	RL: DEV (Device component use); USES (Uses)				
	(membrane from, wound-covering material containing)				
IT	Bactericides, Disinfectants, and Antiseptics				
	Siloxanes and Silicones, biological studies				
	Urethane polymers , biological studies				
	RL: BIOL (Biological study)				
	(wound-covering material containing)				
IT	Medical goods				
	(dressings, gel-forming film and water-repellent layer in)				
IT	Alkenes, polymers				
	RL: DEV (Device component use); USES (Uses)				
	(polymers, membrane from, wound-covering material containing)				
IT	Alkenes, polymers				
	RL: DEV (Device component use); USES (Uses)				
	(polymers, halogenated, membrane from, wound-covering material containing)				
IT	25038-59-9, Polyethylene terephthalate , biological studies				
	RL: BIOL (Biological study)				
	(composite with poly(vinylidene fluoride) membrane from, wound-covering material containing)				
IT	24937-79-9, Poly(vinylidene fluoride)				
	RL: BIOL (Biological study)				
	(composite with polyethylene terephthalate , membrane from, wound-covering material containing)				

- IT 79-10-7D, Acrylic acid, esters, **polymers** 79-41-4D, Methacrylic acid, esters, **polymers** 116-14-3D, **polymers** 1398-61-4D, Chitin, derivs. 9003-07-0, Polypropylene 9004-32-4, Sodium carboxymethyl cellulose 9004-61-9D, Hyaluronic acid, derivs. 9005-32-7D, Alginic acid, derivs. 9012-76-4D, Chitosan, derivs. 106107-54-4, Butadiene-styrene block **copolymer** 107241-00-9, Ethyl acrylate-propylene graft **copolymer** 132789-83-4, Ethyl acrylate-vinylidene fluoride graft **copolymer** 142063-96-5 142173-58-8 142224-77-9 142224-78-0 142224-79-1 142224-80-4
RL: DEV (Device component use); USES (Uses)
(**membrane** from, wound-covering material containing)
- IT 7440-22-4D, **Silver**, compds. 7761-88-8, **Silver** nitrate, biological studies 22199-08-2, **Silver** sulfadiazine
RL: BIOL (Biological study)
(wound-covering material containing)
- L37 ANSWER 34 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:217329 HCAPLUS
DN 116:217329
TI Process for concentrating or separating mixtures of organic compounds
IN Berger, Joseph; Feldkamp, Thomas; Lohse, Friedrich; Mueller, Manfred
PA Ciba-Geigy A.-G., Switz.
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1
- | | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------------------|------|----------|-----------------|----------|
| PI | EP 463988 | A2 | 19920102 | EP 1991-810437 | 19910611 |
| | EP 463988 | A3 | 19920422 | | |
| | R: CH, DE, FR, GB, IT, LI | | | | |
| | CA 2044719 | AA | 19911220 | CA 1991-2044719 | 19910617 |
| | US 5152899 | A | 19921006 | US 1991-716714 | 19910617 |
| | JP 05070398 | A2 | 19930323 | JP 1991-173429 | 19910619 |
| PRAI | CH 1990-2037 | | 19900619 | | |
- AB Semipermeable **membranes** comprising **polymers** of [CF₂C(R₁)₂WCF₂CFR₃ [R₃ = (OCF₂CFR₂)_x[O(CFR₂y)_zSO₃M; R₁, R₂ = F, C₁-10 perfluoroalkyl; M = H, ammonium cation, metal cation; w = 5-15; x = 0-6; y = 1-16; z = 0-16] are employed in separation of organic carboxylic salts from nonionic organic compds. Solns. of said salts and compds. in (alkoxy)alkanols under 1-10 MPa pressure are separated from pure **solvent** by said **membrane**. Permeation of the **membrane** by a nonionic compound is favored when M is a small univalent cation whereas permeation by salt is favored when M is a larger (multivalent) cation. Thus, salt is retained when M = **Ag**⁺ and nonpolar organic compds. are retained when M = C₅⁺.
- IC ICM B01D061-24
ICS C07C051-42
- CC 48-1 (Unit Operations and Processes)
Section cross-reference(s): 45
- ST org mixt sepn semipermeable **membrane**
- IT Permeability and Permeation
(separation by, of carboxylate salts from nonionic organic compds., process for)
- IT 79-20-9, Methyl acetate 80-40-0, Ethyl p-toluenesulfonate 93-58-3, Methyl benzoate 98-86-2, Acetophenone, preparation 100-51-6, Benzyl **alcohol**, preparation 100-66-3, Methylphenyl ether, preparation 101-41-7, Methylphenylacetate 103-26-4, Methylcinnamate **131-11-3**

, **Dimethylphthalate** 614-99-3, Ethylfuran-2-carboxylate
2396-84-1, Ethyl sorbate 3319-31-1

RL: PROC (Process)

(separation of, from carboxylate salt, **membrane process**
for)

IT 553-54-8, Lithium benzoate 1470-83-3, Lithium p-toluenesulfonate
1863-63-4, Ammonium benzoate 15082-44-7, Lithiumphenylacetate
15968-00-0 83028-91-5, Lithium sorbate 110419-19-7 111730-83-7
141181-26-2 141181-27-3 141181-28-4

RL: PROC (Process)

(separation of, from nonionic organic compound, **membrane**
process for)

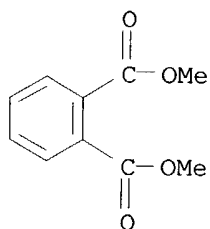
IT **131-11-3, Dimethylphthalate**

RL: PROC (Process)

(separation of, from carboxylate salt, **membrane process**
for)

RN 131-11-3 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 35 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1991:584636 HCAPLUS

DN 115:184636

TI Thermoplastic resin compositions with permanent antistatic property

IN Ishikawa, Hiroaki; Sasagawa, Masahiro; Kasahara, Hideo

PA Asahi Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03103466	A2	19910430	JP 1989-290058	19891109
PRAI	JP 1989-158313		19890622		

AB Impact-resistant antistatic compns. comprise (a) thermoplastic resins, (b) polyethylene oxide (I) or block copolymers with $\geq 50\%$ I content, and (c) metal salts soluble in I, in amts. such that $0.03 \leq b/a \leq 0.3$ and $0.01 \leq c/b \leq 0.5$. Thus, 12:88 butadiene-styrene graft copolymer 87.5, 8:92 methacrylic acid-styrene copolymer 12.5, I 10, and K thiocyanate (II) 1 part were blended, pelletized, and molded to give sheets having Izod impact strength 14 kg-cm/cm, surface resistivity as prepared $8 + 10^9$ and $9 + 10^9 \Omega$, and after 3 mo $8 + 10^9$ and $10 + 10^9 \Omega$, with and without being dipped 10 min in water, resp., vs 10, $5 + 10^{13}$ and $5 + 10^{13}$, and $6 + 10^{13}$ and $7 + 10^{13}$, resp., for sheets containing 2 parts I and 1 part II, instead.

IC ICM C08L071-02

ICS C08L023-04; C08L025-04; C08L055-02; C08L071-02; C08L071-12
 CC 37-6 (**Plastics** Manufacture and Processing)
 Section cross-reference(s): 76
 ST thermoplastic polyoxyethylene salt antistatic molding; potassium
 thiocyanate thermoplastic antistatic molding; impact resistance
 thermoplastic polyoxyethylene blend; butadiene styrene graft copolymer
 blend; methacrylic acid styrene copolymer blend
 IT Salts, uses and miscellaneous
 RL: USES (Uses)
 (antistatic agents, thermoplastics containing polyethylene glycol and,
 impact-resistant)
 IT Plastics, molded
 Polyoxyphenylenes
 Rubber, ethylene-propene
 RL: USES (Uses)
 (containing polyoxyethylene and metal salts, antistatic and
 impact-resistant)
 IT Antistatic agents
 (metal salts, thermoplastics containing polyethylene glycol and,
 impact-resistant)
 IT Polyoxyalkylenes, uses and miscellaneous
 RL: USES (Uses)
 (polyamide-polyester-, block, thermoplastics containing metal salts and,
 antistatic and impact-resistant)
 IT Polyesters, uses and miscellaneous
 RL: USES (Uses)
 (polyamide-polyoxyalkylene-, block, thermoplastics containing metal salts
 and, antistatic and impact-resistant)
 IT Polyoxyalkylenes, uses and miscellaneous
 RL: USES (Uses)
 (polyester-, block, thermoplastics containing metal salts and, antistatic
 and impact-resistant)
 IT Polyamides, uses and miscellaneous
 RL: USES (Uses)
 (polyester-polyoxyalkylene-, block, thermoplastics containing metal salts
 and, antistatic and impact-resistant)
 IT Polyesters, uses and miscellaneous
 RL: USES (Uses)
 (polyoxyalkylene-, block, thermoplastics containing metal salts and,
 antistatic and impact-resistant)
 IT 333-20-0 540-72-7 557-42-6, Zinc thiocyanate 2923-18-4
2923-28-6, Silver trifluoromethanesulfonate 2926-30-9
 7447-39-4, Copper (II) chloride, uses and miscellaneous 7447-41-8,
 Lithium chloride (LiCl), uses and miscellaneous 7546-30-7, Mercury
 chloride (HgCl) 7550-35-8, Lithium bromide 7646-79-9, Cobalt (II)
 chloride, uses and miscellaneous 7646-85-7, Zinc chloride, uses and
 miscellaneous 7647-15-6, Sodium bromide, uses and miscellaneous
 7681-11-0, Potassium iodide, uses and miscellaneous 7681-82-5, Sodium
 iodide, uses and miscellaneous 7699-45-8, Zinc bromide 7758-02-3,
 Potassium bromide, uses and miscellaneous 7758-94-3, Ferrous chloride
 7789-45-9, Copper bromide (CuBr₂) 7790-69-4, Lithium nitrate
 10031-22-8, Lead bromide 10101-63-0, Lead iodide 10102-68-8, Calcium
 iodide 10108-64-2, Cadmium chloride 10139-47-6, Zinc iodide
 10377-51-2, Lithium iodide 13462-88-9, Nickel bromide (NiBr₂)
 13755-29-8, Sodium borofluoride 13762-51-1, Potassium borohydride
 13767-71-0, Copper iodide (CuI₂) 14075-53-7, Potassium borofluoride
14104-20-2, Silver borofluoride 14283-07-9 15192-76-4,
 Copper(II) thiocyanate 16940-66-2, Sodium borohydride 16949-15-8,
 Lithium borohydride 17084-13-8, Potassium hexafluorophosphate

21324-39-0, Sodium hexafluorophosphate 21324-40-3, Lithium hexafluorophosphate 34946-82-2, Copper(II) trifluoromethanesulfonate 54010-75-2, Zinc trifluoromethanesulfonate

RL: USES (Uses)

(antistatic agents, thermoplastics containing polyethylene glycol and, impact-resistant)

IT 9002-86-2, PVC 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-53-6, Polystyrene 9010-79-1, Ethylene-propylene copolymer 9010-92-8, Methacrylic acid-styrene copolymer 9011-14-7, PMMA 27341-67-9, Acrylonitrile-methacrylic acid-styrene copolymer 106107-54-4, Butadiene-styrene block copolymer 106107-54-4D, Butadiene-styrene block copolymer, hydrogenated 106677-58-1, ABS graft copolymer 106974-54-3, Butadiene-styrene graft copolymer 112572-61-9, Butadiene-methacrylic acid-styrene graft copolymer

RL: USES (Uses)

(containing polyoxyethylene and metal salts, antistatic and impact-resistant)

IT 9010-79-1

RL: USES (Uses)

(rubber, containing polyoxyethylene and metal salts, antistatic and impact-resistant)

IT 25322-68-3 106343-12-8, Dimethyl terephthalate-ethylene glycol-polyethylene glycol block copolymer 113264-08-7

RL: USES (Uses)

(thermoplastics containing metal salts and, antistatic and impact-resistant)

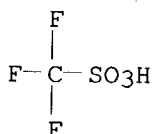
IT 2923-28-6, Silver trifluoromethanesulfonate 14104-20-2, Silver borofluoride

RL: USES (Uses)

(antistatic agents, thermoplastics containing polyethylene glycol and, impact-resistant)

RN 2923-28-6 HCAPLUS

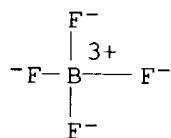
CN Methanesulfonic acid, trifluoro-, silver(1+) salt (8CI, 9CI) (CA INDEX NAME)



● Ag(I)

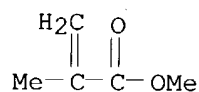
RN 14104-20-2 HCAPLUS

CN Borate(1-), tetrafluoro-, silver(1+) (8CI, 9CI) (CA INDEX NAME)



● Ag(I) +

IT 9011-14-7, PMMA
 RL: USES (Uses)
 (containing polyoxyethylene and metal salts, antistatic and impact-resistant)
 RN 9011-14-7 HCAPLUS
 CN 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer (9CI) (CA INDEX NAME)
 CM 1
 CRN 80-62-6
 CMF C5 H8 O2



L37 ANSWER 36 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1991:255808 HCAPLUS
 DN 114:255808
 TI Method for paired electrochemical synthesis with simultaneous production of ethylene glycol
 IN Weinberg, Norman L.; Genders, John D.; Mazur, Duane J.
 PA Electrosynthesis Co., Inc., USA; SKA Associates
 SO U.S., 10 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4950368	A	19900821	US 1989-335894	19890410
	JP 04009486	A2	19920114	JP 1989-339899	19891228
	ZA 9002521	A	19910327	ZA 1990-2521	19900402
	EP 392370	A2	19901017	EP 1990-106570	19900405
	EP 392370	A3	19910724		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	CA 2014055	AA	19901010	CA 1990-2014055	19900406
	JP 03056683	A2	19910312	JP 1990-94922	19900410
PRAI	US 1989-335894		19890410		

AB Paired electrochem. synthesis reactions are described in which ethylene glycol is formed at the cathode of a **membrane** divided cell at high concns. and current efficiencies ≤99%. Simultaneously, a

compatible process is also conducted at the anode of the same electrochem. cell by reacting indirectly generated anode products with organic **substrates** to form secondary products, such as polybasic acids. The process is especially advantageous in that such secondary products, where appropriate, can be further reacted with the ethylene glycol prepared from the catholyte of the same cell to form useful tertiary products, especially polyesters like polyethylene **terephthalate**. The mole ratios of ethylene glycol and polybasic acid can be controlled through selective use of a regeneratable redox reactant.

- IC ICM C25C003-00
- NCL 204072000
- CC 72-9 (Electrochemistry)
- Section cross-reference(s): 23, **35**, 45
- ST ethylene glycol prodn paired electrochem synthesis
- IT Synthesis
 - (electrochem., paired, and production of ethylene glycol)
- IT 7440-22-4, **Silver**, uses and miscellaneous
 - RL: USES (Uses)
 - (divalent and monovalent, in paired-electrosynthesis production of ethylene glycol)
- IT 7440-18-8, Ruthenium, uses and miscellaneous
 - RL: USES (Uses)
 - (hexavalent and tetravalent, in paired-electrosynthesis production of ethylene glycol)
- IT 7440-47-3, Chromium, uses and miscellaneous
 - RL: USES (Uses)
 - (hexavalent and trivalent, in paired-electrosynthesis production of ethylene glycol)
- IT 60-00-4, EDTA, uses and miscellaneous
 - RL: USES (Uses)
 - (in paired-electrosynthesis manufacture of ethylene glycol)
- IT 75-59-2, Tetramethylammonium hydroxide 75-75-2, Methane sulfonic acid 139-13-9, NTA 141-53-7, Sodium formate 537-01-9, Cerium carbonate 2386-57-4, Sodium methanesulfonate 35733-58-5, Tetrabutylammonium formate 65411-49-6, Tetrabutylammonium methanesulfonate 107355-42-0
 - RL: PRP (Properties)
 - (in paired-electrosynthesis manufacture of ethylene glycol)
- IT 14265-44-2, Phosphate, uses and miscellaneous 14808-79-8, Sulfate, uses and miscellaneous 14874-70-5, Tetrafluoroborate 14996-02-2, uses and miscellaneous 16919-18-9, Hexafluorophosphate 16984-48-8, Fluoride, uses and miscellaneous
 - RL: USES (Uses)
 - (in paired-electrosynthesis production of ethylene glycol)
- IT 75-75-2, Methanesulfonic acid
 - RL: PRP (Properties)
 - (in paired-electrosynthesis production of ethylene glycol)
- IT 66796-30-3, Nafion 117 67053-88-7, Nafion 324 77323-49-0, Nafion 417 116134-47-5, Raipore R 4035
 - RL: PRP (Properties)
 - (ion-exchange **membrane**, in paired-electrosynthesis production of ethylene glycol)
- IT 84-65-1P, Anthraquinone 100-21-0P, 1,4-Benzenedicarboxylic acid, preparation 106-51-4P, 2,5-Cyclohexadiene-1,4-dione, preparation 121-91-5P, Isophthalic acid, preparation 130-15-4P, 1,4-Naphthalenedione 554-95-0P, Trimesic acid 605-70-9P, Naphthalene-1,4-dicarboxylic acid 25038-59-9P, preparation 26948-62-9P, Polyethylene **isophthalate**
 - RL: PREP (Preparation)
 - (manufacture of, in paired-electrosynthesis production of ethylene glycol)
- IT 107-21-1P, Ethylene glycol, preparation

- RL: PREP (Preparation)
(manufacture of, paired electrosynthesis for)
- IT 71-43-2, Benzene, reactions 91-20-3, Naphthalene, reactions 99-94-5
106-42-3, reactions 120-12-7, Anthracene, reactions 589-18-4
589-29-7, 1,4-Benzenedimethanol 52010-97-6, p-Hydroxymethyl benzaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(oxidation of, in paired-electrosynthesis production of ethylene glycol)
- IT 108-38-3, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in paired-electrosynthesis production of ethylene glycol)
- IT 50-00-0P, Formaldehyde, reactions
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(reduction of, electrochem., for ethylene glycol production, paired electrosynthesis in)
- IT 7439-92-1, Lead, uses and miscellaneous
RL: USES (Uses)
(tetravalent and divalent, in paired-electrosynthesis production of ethylene glycol)
- IT 7440-62-2, Vanadium, uses and miscellaneous
RL: USES (Uses)
(tetravalent and pentavalent, in paired-electrosynthesis production of ethylene glycol)
- IT 7440-45-1, Cerium, uses and miscellaneous
RL: USES (Uses)
(tetravalent and trivalent, in paired-electrosynthesis production of ethylene glycol)
- IT 7439-89-6, Iron, uses and miscellaneous 7439-96-5, Manganese, uses and miscellaneous
7440-48-4, Cobalt, uses and miscellaneous
RL: USES (Uses)
(trivalent and divalent, in paired-electrosynthesis production of ethylene glycol)
- IT 7440-28-0, Thallium, uses and miscellaneous
RL: USES (Uses)
(trivalent and monovalent, in paired-electrosynthesis production of ethylene glycol)
- L37 ANSWER 37 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:109423 HCAPLUS
DN 114:109423
TI Direct observation of ion behavior in a **membrane** containing valinomycin
AU Fujiwara, Masato
CS Asaka Res. Lab., Fuji Photo Film Co., Ltd., Asaka, 351, Japan
SO Journal of Electroanalytical Chemistry and Interfacial Electrochemistry (1990), 296(1), 259-62
CODEN: JEIEBC; ISSN: 0022-0728
DT Journal
LA English
AB Ion transport in the **polymer membrane** of a liquid **membrane** type should be different from that of the liquid **membrane**. The ion carrier (large molar mass) in the liquid **membrane** can migrate along with the in, but the ion carrier which acts as a hopping site for the ion cannot move in the **polymer membrane**. X-ray microanal. showed that the **Ag⁺** ion of an **AgCl/Ag** layer diffuses into the **membrane** which contains valinomycin, whereas **K⁺** ions are not transported across the **membrane** within a short period.
- CC 66-4 (Surface Chemistry and Colloids)
Section cross-reference(s): 9, 72, 79

- ST **membrane** ion transport valinomycin selective electrode;
potassium diffusion valinomycin **polymer membrane**;
silver diffusion valinomycin **polymer membrane**
- IT Diffusion
(of **silver** ion, into **membrane** containing valinomycin)
- IT Electrodes
(cation-selective, valinomycin-containing **membrane** for)
- IT 7440-09-7, Potassium, uses and miscellaneous
RL: USES (Uses)
(binding of, by valinomycin in ion-selective electrode **polymer membrane**)
- IT 7783-90-6, **Silver** chloride, uses and miscellaneous
RL: USES (Uses)
(cation-selective electrodes formed by valinomycin-**membrane** coating of)
- IT 7440-22-4, **Silver**, properties
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(diffusion of, into valinomycin-containing **membrane** in ion-selective electrode)
- IT 117-81-7, Dioctyl **phthalate**
RL: PRP (Properties)
(ion carrier **solvent**, for cation-selective electrode **polymer membrane**)
- IT 9003-22-9, Vinyl acetate-vinyl chloride **polymer**
RL: PRP (Properties)
(ion-selective electrode **membrane**, containing valinomycin)
- L37 ANSWER 38 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:135597 HCAPLUS
DN 112:135597
TI Minaturized reference electrode for use in ion-selective electrode half cell, and method of making it
IN Schultz, Steven G.
PA Abbott Laboratories, USA
SO U.S., 9 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1
- | | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | US 4891125 | A | 19900102 | US 1989-336944 | 19890412 |
| PRAI | US 1989-336944 | | 19890412 | | |
- AB A miniaturized reference electrode includes a dielec. thermoplastic cup having a cavity to hold a reference liquid solution and having a sample contacting orifice at one end. A **membrane** comprising cellulose acetate and a **solvent** capable of exerting a **solvent** action on the sidewalls of the cup orifice is drop-deposited in the orifice and cured in situ. The resulting **membrane** extends across the orifice and is interdigitatedly anchored to the orifice sidewalls. The reference electrode further includes an **Ag/AgCl** screw-in electrode machined from **Ag** rod extending into and hermetically sealing the cup cavity. A reference liquid fill solution having a Cl⁻ and K⁺ concentration similar to that found in the samples to be tested and the storage soak solution is provided to minimize drift of reference potential. The miniature reference electrode is intended for use with a miniaturized ion-selective electrode half cell in a test cartridge on a centrifugal clin. analyzer to determine electrolyte

concns. in fluid samples. Thus, a **membrane**-forming composition contained cellulose acetate 0.5, acetone 87.3; ~~CaCl₂·2H₂O 3.3~~, MeOH 7.3, and diMe **phthalate** 1.6%. Reference electrode assemblies containing the composition were assembled, and the **membranes** were evaluated for conductances and adhesion lifetimes.

IC ICM G01N027-30
 NCL 204435000
 CC 9-7 (Biochemical Methods)
 Section cross-reference(s): 79, 80
 ST miniature ref electrode clin analysis; cellulose acetate **membrane**
 ref electrode; ion selective miniature ref electrode
 IT Electric potential
 (control of, in miniature reference electrode for clin. anal.)
 IT Salts, uses and miscellaneous
 RL: USES (Uses)
 (in **membrane**-forming composition for miniature reference electrode for
 clin. anal.)
 IT Physiological saline solutions
 Acrylic **polymers**, uses and miscellaneous
 RL: USES (Uses)
 (in miniature reference electrode for clin. anal.)
 IT **Alcohols**, uses and miscellaneous
 RL: USES (Uses)
 (C1-10, in **membrane**-forming composition for miniature reference
 electrode for clin. anal.)
 IT Carboxylic acids, esters
 RL: USES (Uses)
 (C1-4-alkyl esters, in **membrane**-forming composition for miniature
 reference electrode for clin. anal.)
 IT **Alcohols**, uses and miscellaneous
 Hydrocarbons, uses and miscellaneous
 RL: USES (Uses)
 (C5-10-cyclic, in **membrane**-forming composition for miniature reference
 electrode for clin. anal.)
 IT Carboxylic acids, esters
 RL: USES (Uses)
 (aryl, C1-4-alkyl esters, in **membrane**-forming composition for
 miniature reference electrode for clin. anal.)
 IT Analysis
 (clin., miniature reference electrode for)
 IT Electrodes
 (ion-selective, reference, miniature, for clin. anal.)
 IT Electrodes
 (**membrane**, cellulose acetate, in miniature ion-selective
 electrode half-cell for clin. anal.)
 IT **Solvents**
 (polar, organic, in **membrane**-forming composition for miniature reference
 electrode for clin. anal.)
 IT Electrodes
 (reference, miniature, for clin. anal.)
 IT Plastics
 RL: ANST (Analytical study)
 (thermo-, dielec., cup of, in miniature reference electrode for clin. anal.)
 IT 7440-23-5D, Sodium, salts 7440-50-8D, Copper, salts 7440-66-6D, Zinc,
 salts 7440-70-2D, Calcium, salts 10035-04-8, Calcium chloride
 dihydrate 10043-52-4, Calcium chloride, uses and miscellaneous
67-56-1, Methanol, uses and miscellaneous 67-64-1,
 Acetone, uses and miscellaneous **109-99-9**, Tetrahydrofuran, uses
 and miscellaneous **131-11-3**, Dimethyl **phthalate**

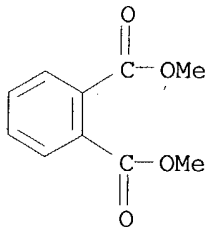
- 7429-90-5D, Aluminum, salts 7439-93-2D, Lithium, salts 7439-95-4D, Magnesium, salts 7440-09-7D, Potassium, salts
 RL: ANST (Analytical study)
 (in **membrane**-forming composition for miniature reference electrode for clin. anal.)
- IT 7447-40-7, Potassium chloride, uses and miscellaneous
 RL: USES (Uses)
 (in miniature reference electrode for clin. anal.)
- IT 7783-90-6, **Silver** chloride, uses and miscellaneous
 RL: USES (Uses)
 (miniature reference electrode for clin. anal. containing **silver** and)
- IT 7440-22-4, **Silver**, uses and miscellaneous
 RL: USES (Uses)
 (miniature reference electrode for clin. anal. containing **silver** chloride and)
- IT 9004-35-7, Cellulose acetate
 RL: ANST (Analytical study)
 (miniature reference electrode **membrane** containing, for clin. anal.)
- IT 67-56-1, **Methanol**, uses and miscellaneous
 109-99-9, Tetrahydrofuran, uses and miscellaneous 131-11-3, Dimethyl **phthalate**
 RL: USES (Uses)
 (in **membrane**-forming composition for miniature reference electrode for clin. anal.)
- RN 67-56-1 HCAPLUS
 CN Methanol (8CI, 9CI) (CA INDEX NAME)

H₃C-OH

- RN 109-99-9 HCAPLUS
 CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)



- RN 131-11-3 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



- L37 ANSWER 39 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1986:81344 HCAPLUS
 DN 104:81344
 TI Ion-selective electrode for titration of organic ions

IN Vytras, Karel; Remes, Miroslav; Riha, Vaclav
 PA Czech.
 SO Czech., 10 pp.
 CODEN: CZXXA9
 DT Patent
 LA Czech
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 225222	B	19840213	CS 1981-5699	19810727
PRAI	CS 1981-5699		19810727		

AB Simple ion-selective electrodes for titration of organic ions were made from stainless steel, Al, graphite, Au-plated Cu, brass, or Ag wire (diameter 4-5 mm) with an insulated central part and one end coated with a 0.1-0.3 mm **membrane** from poly(vinyl chloride) or poly(vinyl butyral) containing a polar plasticizer (2-nitrophenylalkyl ether, tricresyl phosphate, dialkyl **phthalate**, sebacate, or oxalate). The **membrane** is made by repeated dipping into a THF or cyclohexanone solution of the **polymer** (30 mg/mL) and the plasticizer (0.1 mg/mL). The product of the 1st titration is adsorbed by the **membrane** and represents an electroactive compound. The electrode and a SCE were used for potentiometric titration of cetylpyridinium bromide with NaBPh₄.

IC G01N027-30

CC 80-2 (Organic Analytical Chemistry)
 Section cross-reference(s): 72

ST **membrane** ion selective electrode; potentiometry titrn ion selective electrode

IT Vinyl acetal **polymers**
 RL: ANST (Analytical study)
 (butyrals, **membranes**, on ion-selective electrodes for potentiometric titration of organic ions)

IT Electrodes
 (ion-selective, **membrane**, for potentiometric determination of organic ions)

IT Ethers, uses and miscellaneous
 RL: ANST (Analytical study); USES (Uses)
 (nitrophenyl, alkyl, as plasticizer for **polymer membrane** on ion-selective electrodes for potentiometric titration of organic ions)

IT 117-81-7 122-62-3 144-62-7D, dialkyl esters 1330-78-5 37682-29-4 77761-56-9
 RL: ANST (Analytical study)
 (as plasticizer, for **polymer membrane** on ion-selective electrodes for potentiometric titration of organic ions)

IT 88-99-3D, dialkyl esters 111-20-6D, dialkyl esters 140-72-7 2260-50-6 6424-75-5
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, **membrane** ion-selective electrode for potentiometric titrimetric)

IT 7440-57-5, uses and miscellaneous
 RL: ANST (Analytical study); USES (Uses)
 (electrodes from copper plated with, ion-selective, for potentiometric titration of organic ions)

IT 7440-50-8, uses and miscellaneous
 RL: ANST (Analytical study); USES (Uses)
 (electrodes, gold-plated ion-selective, for potentiometric titration of organic ions)

IT 7429-90-5, uses and miscellaneous 7440-22-4, uses and miscellaneous

7782-42-5, uses and miscellaneous 12597-68-1, uses and miscellaneous
 12597-71-6, uses and miscellaneous
 RL: ANST (Analytical study); USES (Uses)
 (electrodes, ion-selective, for potentiometric titration of organic ions)

IT 9002-86-2

RL: ANST (Analytical study)
 (membrane, on ion-selective electrodes for potentiometric
 titration of organic ions)

L37 ANSWER 40 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1984:95283 HCAPLUS
 DN 100:95283
 TI Flexible screen-printable conductive composition
 IN Nazarenko, Nicholas
 PA du Pont de Nemours, E. I., and Co. , USA
 SO U.S., 5 pp. Cont.-in-part of U.S. Ser. No. 269,864, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4425263	A	19840110	US 1981-317278	19811102
	CA 1190735	A1	19850723	CA 1982-404183	19820601
	DK 8202486	A	19821204	DK 1982-2486	19820602
	JP 58001745	A2	19830107	JP 1982-93251	19820602
	JP 60025055	B4	19850615		
	EP 68168	A1	19830105	EP 1982-104858	19820603
	EP 68168	B1	19841227		

R: BE, DE, FR, GB, IT, LU, NL

PRAI US 1981-269864 19810603
 US 1981-317278 19811102

AB A composition for **membrane** touch switches consists of an active phase
 of 30-80 weight% conductive powder dispersed in an organic medium (20-70
 weight%)

consisting essentially of a linear aromatic polyester resin dissolved in
 volatile **solvent**. The conductive material may be **Ag**,
 Ni, Cu, C, Fe, Au, Pt, Pd, and their mixts. and alloys. Alternatively the
 conductive material may comprises a glass or organic **polymer** coated
 with **Ag**, Cu, or Ni. The linear aromatic **polymer** has an
 intrinsic viscosity of 0.5-1, and is the polycondensation product of a
 C2-4 alkylene glycol with either isophthalic or terephthalic acid, e.g.
 poly(ethylene **isophthalate** or **terephthalate**). The
 volume **solvent** has a boiling range of 150-220°, and is, in
 particular, carbitol acetate, or may be mixed with 1-methylethylene glycol
 Bu ether. The weight ratio of resin to **solvent** is 0.15-0.5. These
 compns. provide increased conductivity and abrasion resistance. Examples are
 presented for compns. from **Ag** with carbitol acetate, cellulose
 acetate and 1-methylethylene glycol Bu ether.

IC H01B001-06

NCL 252511000

CC 76-2 (Electric Phenomena)

ST **membrane** touch switch printable compn; conductive compn
membrane touch switch; **silver** compn **membrane**
 touch switch; polyethylene **isophthalate** **membrane** touch
 switch; **terephthalate** polyethylene **membrane** touch
 switch; carbitol acetate **membrane** touch switch

IT Polyesters, uses and miscellaneous
 RL: USES (Uses)

(in screened-printable conductivity compns. for **membrane** touch switches)

IT Electric switches and switching

(**membrane**-touch, screened-printable conductivity composition for)

IT Electric conductors

(screened-printable compns., for **membrane** touch switches)

IT 7439-89-6, uses and miscellaneous 7440-02-0, uses and miscellaneous
7440-05-3, uses and miscellaneous 7440-06-4, uses and miscellaneous
7440-22-4, uses and miscellaneous 7440-44-0, uses and miscellaneous
7440-50-8, uses and miscellaneous 7440-57-5, uses and miscellaneous

RL: TEM (Technical or engineered material use); USES (Uses)

(elec. conductors, in screened-printable compns. for **membrane** touch switches)

IT 112-15-2 9004-35-7 25038-59-9, uses and miscellaneous 26810-06-0
26948-62-9 29387-86-8

RL: USES (Uses)

(in screened-printable conductivity composition for **membrane** touch switches)

L37 ANSWER 41 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1983:199428 HCAPLUS

DN 98:199428

TI Laminated films with selective light transmission

PA Teijin Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57193357	A2	19821127	JP 1981-63400	19810428
	JP 63004507	B4	19880129		
PRAI	JP 1981-63400		19810428		

AB In a **membrane** with selective light transmission, an assembly of
(1) thin metal layers and (2) antireflecting layers with high n formed on
a transparent **substrate**, ≥ 1 addnl. barrier layer (3) is
inserted just after 1 so that each 1 is sandwiched between 2 and 3 to
improve the durability, where the ratio of the Ar-etching rate in 3 to
that in 2 is ≤ 0.6 . The films are useful for, e.g., greenhouses.
Thus, a 50- μ biaxially oriented poly(ethylene **terephthalate**)
[25038-59-9] film (light transmittance 86%) was coated on 1 side with a
solution of 3 parts (BuO)₄Ti tetramer [70799-68-7] in 97 parts iso-PrOH,
heated 3 min at 120° to give a 200-Å coating, sputter-plated to
150 Å with 92:8 **Ag**-Cu alloy [57852-89-8], and
radio-frequency sputter-plated with Ti in a 95:5 Ar-O mixture to 31 Å to
give a laminate. The laminate had 73% visible light transmittance, 93% IR
(wavelength 10 μ) reflection, and the IR reflection decreased to 85%
after 1200 h air blowing at 90°, compared with 71%, 92%, and 240 h,
resp., when the Ti sputter-plating was omitted.

IC B32B015-08

CC 38-3 (**Plastics** Fabrication and Uses)

Section cross-reference(s): 42

ST selective light transmission **membrane**; polyethylene
terephthalate film coating; sputter plating polyethylene
terephthalate film; butoxytitanium tetramer antireflection
coating; **silver** copper alloy sputter plating

IT Sputtering

(of titanium and copper-**silver** alloy, on poly(ethylene

- terephthalate**) films, for laminates with selective light transmission)
- IT 7440-32-6, uses and miscellaneous 57852-89-8 70799-68-7
RL: USES (Uses)
(coatings, on poly(ethylene **terephthalate**) films, for selective light transmission)
- IT 25038-59-9, uses and miscellaneous
RL: USES (Uses)
(film, laminates, with selective light transmission)
- L37 ANSWER 42 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:134197 HCAPLUS
DN 98:134197
TI Electrode properties of valinomycin **membranes** plasticized by nitro compounds
AU Mikhel'son, K. N.; Grekovich, A. L.; Materova, E. A.
CS Leningr. Gos. Univ., Leningrad, USSR
SO Elektrokimiya (1983), 19(2), 249-52
CODEN: ELKKAX; ISSN: 0424-8570
DT Journal
LA Russian
AB Typical nitro plasticizers used in the title study were o-nitrophenyl octyl ether [37682-29-4] and o-nitro-p-cymene [943-15-7]. Poly(vinyl chloride) [9002-86-2] was treated in a weight ratio 1:3 with the plasticizer. **THF** was the **solvent** for the **polymer**. The electromotive force was measured of the cell: **Ag**|**AgCl**, **KCl** (saturated).**tplbond**.external solution|**membrane**|**KCl**(0.01m), **AgCl**|**Ag**, with a precision of ± 0.1 mV. The solution temperature was $20 \pm 1^\circ$. **Membranes** plasticized with o-nitrophenyl octyl ether contained valinomycin [2001-95-8] in concns. of 0-5.52 + 10-3m. The curves of the dependence of electromotive force on K activity in the solns., using on electrode with these **membranes**, are presented. The selectivity of the **membrane** with respect to K^+ was studied by measuring the electromotive force of the cell in solns. with varying concns. of **KCl** and constant concentration of electrolyte containing 0.1m **NaCl**, 0.1m **NH4Cl**, and 0.01m **CsCl**. The electromotive force was also measured in solns. of the **NaCl**, **NH4Cl**, and **CsCl**. The best plasticizers are phthalic acid diesters, especially dioctyl **phthalate** [117-81-7]. The data agree with predictions on the effect of the **solvent** nature on the electrode properties of valinomycin **membrane**.
- CC 72-2 (Electrochemistry)
Section cross-reference(s): 79
- ST **solvent** effect electrode property **membrane**; electrode property valinomycin **membrane**; plasticized valinomycin **membrane** electrode; potassium ion selective electrode
- IT Electric potential
(of cell with valinomycin **membranes** plasticized by nitro compds.)
- IT **Solvent** effect
(on electrode properties of valinomycin **membranes**)
- IT Electrodes
(ion-selective, valinomycin **membranes** plasticized by nitro compds. for)
- IT 7440-09-7, analysis
RL: ANT (Analyte); ANST (Analytical study)

(determination of, valinomycin **membranes** for ion-selective electrodes for)

IT 7647-14-5, properties 7647-17-8, properties 12125-02-9, properties
 RL: PRP (Properties)
 (electrode properties of valinomycin **membranes** plasticized by nitro compds. in solns. containing)

IT 2001-95-8
 RL: PRP (Properties)
 (**membranes**, for potassium ion-selective electrodes)

IT 117-81-7
 RL: MOA (Modifier or additive use); USES (Uses)
 (plasticizer, for valinomycin **membrane** for potassium ion-selective electrode)

IT 943-15-7 37682-29-4
 RL: MOA (Modifier or additive use); USES (Uses)
 (plasticizer, for valinomycin **membranes** for potassium ion-selective electrodes)

IT 9002-86-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with plasticizer, for valinomycin **membranes** for potassium ion-selective electrodes)

L37 ANSWER 43 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1982:196198 HCAPLUS
 DN 96:196198
 TI Ion-selective electrode
 IN Battaglia, Charles J.; Chang, Jack C.; Daniel, Daniel S.
 PA Eastman Kodak Co., USA
 SO Can., 77 pp. Division of Can. Appl. No. 276,918.
 CODEN: CAXXA4
 DT Patent
 LA English
 FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 1116696	A2	19820119	CA 1980-352785	19800527
	CA 1093641	A1	19810113	CA 1977-276918	19770425
PRAI	US 1976-687966		19760519		
	CA 1977-276918		19770425		

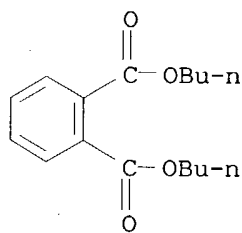
AB Preparation of dry-operative ion-selective electrodes (e.g., for blood anal.) are described. The electrodes are comprised of a dried redox internal electrode in contact with a hydrophobic ion-selective **membrane**. The internal reference electrode has a hydrophilic **polymer** as binder in the layer containing the redox couple and the conducting layer. In 1 example, a laminated ion-selective electrode was prepared by coating a **Ag-AgCl** film on poly(ethylene **terephthalate**) with a poly(vinyl **alc.**)-KCl solution After drying, an ion-selective **membrane** comprised of valinomycin, poly(vinyl chloride), and bromophenyl Ph ether was manually laminated on top of the coating film. A linear semilogarithmic response to K⁺ was observed with a slope of 57 mV/decade in the pK range of 1-4. In a solution containing 5 mM K⁺ and 150 mM Na⁺, the Na⁺ response represented a 3% interference. Thus, small variations in Na⁺ over the clin. range, i.e., 0.12-0.16M, result in <1% variation in the interference. Other electrode compns. are described.

IC G01N027-50
 CC 9-7 (Biochemical Methods)
 Section cross-reference(s): 72
 ST ion selective electrode prepn; potassium detn blood electrode
 IT Gelatins, uses and miscellaneous

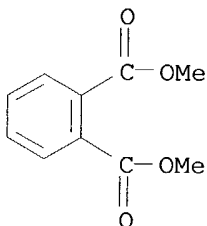
RL: USES (Uses)
 (as binder, in ion-selective electrode)
 IT Rubber, silicone, uses and miscellaneous
 Rubber, urethane, uses and miscellaneous
 RL: DEV (Device component use); USES (Uses)
 (ion-selective **membrane** containing, for electrodes)
 IT Blood analysis
 (ions determination in, ion-selective electrodes for)
 IT Vinyl acetal **polymers**
 RL: DEV (Device component use); USES (Uses)
 (butyrals, ion-selective **membrane** containing, for electrodes)
 IT Electrodes
 (ion-selective, preparation of)
 IT 818-61-1 868-77-9 9002-89-5 9003-01-4 9003-05-8 9003-39-8
 9012-36-6
 RL: ANST (Analytical study)
 (as binder, in ion-selective electrode)
 IT 7440-02-0, uses and miscellaneous 7440-06-4, uses and miscellaneous
 7440-44-0, uses and miscellaneous 7440-57-5, uses and miscellaneous
 RL: USES (Uses)
 (as conductor, in ion-selective electrode)
 IT 2432-90-8 78-93-3, biological studies 109-99-9, biological
 studies 117-81-7
 RL: ANST (Analytical study)
 (as ion carrier, in electrode)
 IT 7440-22-4, analysis 16887-00-6, analysis 24959-67-9, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, ion-selective electrode for)
 IT 13746-66-2 13943-58-3 65532-25-4
 RL: ANST (Analytical study)
 (for redox couple, in ion-selective electrode)
 IT **84-74-2** 109-43-3 117-81-7 **131-11-3** 1655-68-1
 1655-69-2 1754-47-8
 RL: DEV (Device component use); USES (Uses)
 (ion-selective **membrane** containing, for electrode)
 IT 2001-95-8 9003-22-9
 RL: DEV (Device component use); USES (Uses)
 (ion-selective **membrane** containing, for electrodes)
 IT 7440-23-5, uses and miscellaneous
 RL: USES (Uses)
 (potassium determination by ion-selective electrode interference by)
 IT **109-99-9**, biological studies
 RL: BIOL (Biological study)
 (as ion carrier, in electrode)
 RN 109-99-9 HCAPLUS
 CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **84-74-2 131-11-3**
 RL: DEV (Device component use); USES (Uses)
 (ion-selective **membrane** containing, for electrode)
 RN 84-74-2 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 131-11-3 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



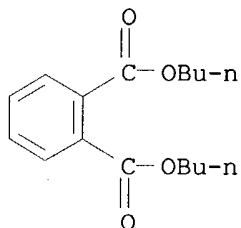
L37 ANSWER 44 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1980:612413 HCAPLUS
 DN 93:212413
 TI Ion-selective electrode
 IN Battaglia, Charles J.; Chang, Jack C.; Daniel, Daniel S.
 PA Eastman Kodak Co., USA
 SO U.S., 22 pp. Cont.-in-part of U.S. Ser. No. 687,966, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4214968	A	19800729	US 1978-893656	19780405
PRAI	US 1976-687966		19760519		

AB These anal. electrodes present a dry, solid appearance and require only a drop i.e. <50 μ L and preferably .apprx.10 μ L of solution to give an accurate measurement. To make a **Ag**/AgX (X = halide) electrode a sample of vacuum-deposited **Ag** on a polyethylene **terephthalate support** was treated for 5 min in a solution containing: glacial HOAc 0.45 mL, NaOH 0.20, K₃Fe(CN)₆ 0.80, and KBr 2.50 g/L (distilled H₂O). After washing for 5 min, inspection revealed a partial conversion to AgBr with a contiguous layer of **Ag** adjacent the **support**. A narrow strip along 1 edge was dipped briefly into Na₂S₂O₅ solution to uncover the **Ag** layer for making an elec. contact. In detns. of Br⁻ in aqueous samples a linear response with an approx. theor. slope (Nernst) was observed

IC G01N027-30; G01N027-46
 NCL 204195000M
 CC 72-7 (Electrochemistry)
 Section cross-reference(s): 13, 79
 ST electrode ion selective dry look; bromide detn ion selective electrode
 IT Gelatins, uses and miscellaneous

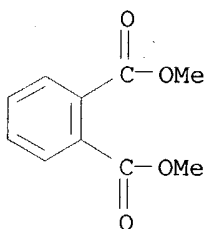
Rubber, silicone, uses and miscellaneous
 Rubber, urethane, uses and miscellaneous
 RL: PRP (Properties)
 (electrodes containing, ion-selective with dry look)
 IT Blood analysis
 (ion-selective electrodes for)
 IT Vinyl acetal **polymers**
 RL: PRP (Properties)
 (butyrals, electrodes containing, ion-selective with dry look)
 IT 16887-00-6, analysis 24203-36-9, analysis 24959-67-9, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, dry look ion-selective electrodes for)
 IT 7440-23-5, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, ion-selective dry look electrode for)
 IT 7440-44-0, uses and miscellaneous
 RL: USES (Uses)
 (electrodes containing, ion-selective with dry look)
 IT 78-42-2 143-66-8 2001-95-8 9002-86-2 9002-89-5 9002-93-1
 9003-05-8 9003-22-9 65532-25-4
 RL: PRP (Properties)
 (electrodes containing, ion-selective with dry look)
 IT 7783-90-6, uses and miscellaneous 7785-23-1
 RL: USES (Uses)
 (electrodes of **silver**, with dry look)
 IT 7440-22-4, uses and miscellaneous
 RL: USES (Uses)
 (electrodes, with dry look)
 IT 78-93-3, uses and miscellaneous **84-74-2** 109-43-3
109-99-9, uses and miscellaneous 117-81-7 **131-11-3**
 RL: USES (Uses)
 (**membrane solvent**, for ion-selective dry look
 electrodes)
 IT 1655-68-1 1655-69-2 1754-47-8 2432-90-8 36563-47-0 65440-56-4
 RL: PRP (Properties)
 (**membrane solvent**, for ion-selective dry look
 electrodes)
 IT 7447-40-7, uses and miscellaneous
 RL: USES (Uses)
 (reference electrolyte, in ion-selective dry look electrodes)
 IT **84-74-2** **109-99-9**, uses and miscellaneous
131-11-3
 RL: USES (Uses)
 (**membrane solvent**, for ion-selective dry look
 electrodes)
 RN 84-74-2 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, dibutyl ester (9CI) (CA INDEX NAME)



RN 109-99-9 HCAPLUS
 CN Furan, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 131-11-3 HCAPLUS
 CN 1,2-Benzenedicarboxylic acid, dimethyl ester (9CI) (CA INDEX NAME)



L37 ANSWER 45 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1980:87629 HCAPLUS
 DN 92:87629
 TI Electrodes for organic ion concentration determination
 IN Muramatsu, Kyoze
 PA Mitsubishi Chemical Industries Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54136893	A2	19791024	JP 1978-44029	19780414
PRAI	JP 1978-44029		19780414		

AB An electrode for determination of organic ion concentration is equipped with an ion-selective **membrane** made of a **polymer** composition containing a compound of a quaternary ammonium ion R₄N⁺ (R = hydrocarbon moiety, halogenated hydrocarbon moiety) and B derivative anion R₁4B⁻ (R₁ = hydrocarbon moiety, halogenated hydrocarbon moiety) or B cage compound anion. The electrode exhibit excellent sensitivity, selectivity, and reproducibility (of anal. data). Thus, 50 mL 10-2M (PhCH₂)₂NMe₂Cl and 50 mL 10-2M NaBPh₄ were mixed, the resultant precipitate was extracted into dichloroethane, the solution was evaporated, and the residue was dissolved in **THF**. The solution was mixed with a solution containing poly(vinyl chloride) and dioctyl **phthalate**, and the mixture was slowly evaporated in a flat container to give an ion-selective **membrane**. The **membrane** was attached to 1 end of a plastic tube, then 10-2M (PhCH₂)NMe₂Cl was added to the tube, and a **Ag/AgCl** electrode was contacted with the solution with a salt bridge (containing KCl) to give an electrode for organic ion concentration measurements. The electrode showed good sensitivity for (PhCh₂NMe₂)⁺ in the concentration range 10⁻⁶-10⁻²M. Very few interferences from other ions were

observed
 IC G01N027-40; G01N027-46
 CC 80-2 (Organic Analytical Chemistry)
 ST org ion selective **membrane** electrode; benzylmethylammonium selective electrode; quaternary ammonium ion selective electrode; phenylborate **membrane** ion selective electrode; borate phenyl **membrane** selective electrode; boron compd **membrane** selective electrode
 IT Quaternary ammonium compounds, analysis
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, ion-selective electrode for)
 IT Electrodes
 (dibenzyltrimethylammonium-selective, dibenzyltrimethylammonium tetraphenylborate **membranes** in)
 IT Electrodes
 (organic ion-selective, quaternary ammonium compds. with boron-derivative anions in **membranes** for)
 IT 14800-26-1
 RL: ANT (Analyte); ANST (Analytical study)
 (determination of, ion-selective electrodes for)
 IT 7440-42-8D, compds. 41742-44-3
 RL: DEV (Device component use); ANST (Analytical study); USES (Uses)
 (**membranes** containing, in organic ion-selective electrodes)

L37 ANSWER 46 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1971:494395 HCAPLUS

DN 75:94395

TI **Polymer membranes** for the determination of lead in solutions

IN Stucky, Gary L.

PA Miles Laboratories Inc.

SO Ger. Offen., 17 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2057114		19710603		
	FR 2069636			FR	
	GB 1312469			GB	
PRAI	US		19691120		
AB	The lead concentration of solns. was determined by measuring the potential difference between a standard calomel electrode immersed in a reference Pb(NO ₃) ₂ solution and an Ag-AgCl electrode immersed in the sample solution by using semipermeable polymeric membranes prepared from solvent solns. containing poly(vinyl chloride) (I), a plasticizer, e.g. dipentyl phthalate (II), and dithizone as chelating agent. Thus, a membrane was prepared by casting a mixture of 0.25 g I, 0.75 ml II, and 2.5 mg dithizone made up to 5 ml with cyclohexanone on microslides and drying for 12 hr at room temperature				
IC	G01N				
CC	79 (Inorganic Analytical Chemistry)				
ST	lead potentiometric detn; PVC membrane lead detn; dithizone membrane lead detn; phthalate membrane lead detn				
IT	Chelating agents				

(in semipermeable **membranes** for lead determination)

IT Plasticizers
(in vinyl chloride **polymer** semipermeable **membranes**,
for lead determination)

IT **Membranes**
(semipermeable, for potentiometric determination of lead)

IT 60-10-6
RL: ANST (Analytical study)
(chelating agents, in semipermeable **membranes** for lead determination)

IT 7439-92-1, analysis
RL: ANT (Analyte); ANST (Analytical study)
(determination of, **polymer membranes** for potentiometric
titrimetric)

IT 131-18-0
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizers, in vinyl chloride **polymers** for semipermeable
membranes, for lead determination)

IT 9002-86-2, uses and miscellaneous
RL: USES (Uses)
(semipermeable **membranes**, in lead determination)

L37 ANSWER 47 OF 47 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1965:13182 HCAPLUS

DN 62:13182

OREF 62:2402g-h,2403a

TI Photographic stripping film

IN Sinclair, James R.

PA Minnesota Mining and Manufacturing Co.

SO 4 pp.

DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3156565		19641110	US	19620913
AB	A stripping film useful in the photomech. arts, that may be manufactured at reduced cost and that can be stripped cleanly without need of solvent treatment, has as consecutive layers or films, a polystyrene base, a releasable membrane , a substratum , and a photosensitive layer. The base is a biaxially oriented polystyrene film with an antihalation backing, or a selective light-absorption dye throughout. The releasable membrane is made from a mixture of an acrylate ester polymer and a cellulose ester or a cellulose ether; typical of the former is the copolymer of Et methacrylate and Me acrylate (Acryloid B-72); typical of the latter are cellulose acetate, cellulose propionate, cellulose butyrate, and cellulose acetate butyrate (I). The substratum is a very thin coating of nitrocellulose and gelatin. The photosensitive layer is a Ag halide gelatin emulsion. E.g., a 0.005-in. thick CdO-pigmented polystyrene film is coated with a releasable membrane solution containing I (20 sec., EAB 381-20) 64, Acryloid B-72 16, di-Bu phthalate 20, EtOAc 10, BuOAc 35, iso-BuOH 75, PhMe 30, and EtOH 150 parts by weight After drying the membrane , it is coated with a subbing composition containing gelatin 3, H ₂ O 2, AcOH 6, nitrocellulose (55.5%) 8, Me ₂ CO 18, and MeOH 63 parts by weight Once the subbing coating is dry, it may be coated with Ag halide emulsion in the conventional manner.				

NCL 096083000

CC 11 (Radiation Chemistry and Photochemistry)

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

- IT Photographic films
(strippable, with polystyrene **support** and releasable **membrane** of acrylate **polymers** and cellulose ester or ether)
- IT 9003-53-6, Styrene **polymers**
(photographic stripping film on **support** of, with **membrane** of acrylate **polymers** and cellulose ester or ether)
- IT 79-41-4, Methacrylic acid 96-33-3, Acrylic acid, methyl ester
9004-36-8, Cellulose, acetate butyrate 9004-57-3, Cellulose, ethyl ether
(releasable **membrane** containing, for photographic stripping film)

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